FEDCO
TREES
2024
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FEDCO TREES 2004

Welcome to Fedco Trees' 20th annual spring order. We encourage people to plant more trees. Diversify your gardens, fields and orchards. We vary our listings every year to increase the choices available and to bring you the hardiest and healthiest plants possible for cold climates. Our no-frills operation and volume discounts help keep plants affordable. Consider ordering in a group with co-workers, friends or neighbors to minimize your costs.

Please come to our annual Tree Sale in Clinton! Along with many of our catalog listings, we bring in many locally grown plants, some rare, some potted, some in quantities too small to list in the catalog. Seeds, organically grown seedlings, seed potatoes, and orchard, farm and garden supplies are also available. The sale is April 30 & May 1, 2004, for people picking up orders and May 7 & 8 for the general public.

Last June I went with friends to southeast Alaska. Their two-story log cabin on a small remote island in Chatham Straight looks like a doll house tucked into the towering trees. The sitka spruce and the western hemlocks were about two and a half feet at the butt and stood nearly 100' tall. What a stunning backdrop for the seals, sea lions, porpoises, humpback whales and hundreds of bald eagles.

The Alaskan forest also provided a reminder of the scale of our New England forests not so very long ago, that what we call mature forests in Maine are merely juvenile at best. Our pines, oaks and hemlocks once rivaled the giant trees of the West Coast. The white pines here in Palermo were 200' tall when the first English settlers arrived in 1790. Perhaps sometime again.

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Phone 207-873-7333. We answer regularly starting in mid-January.

Recently I heard the story of a king who requested that his gardener plant a small seedling oak tree in the castle courtyard the next day. "But sire," the gardener said, "with all due respect, such a tree will not be mature until long after we're all gone." "On second thought then," the king replied, "better plant it this morning."

We have expanded our catalog this year to incorporate the planting instructions which used to be a separate pamphlet. Save this catalog for reference during spring planting. We've also expanded the index to include botanical names.

We believe in selling small trees with well-developed root systems. A good root system is far more important than a big branched treetop. Small trees are not only less expensive than large trees, but also re-establish themselves with minimal transplant shock and grow quickly and vigorously.

Our stock comes from a few large northern nurseries and about twenty small Maine nurseries in our growers co-op. '**ME Grown**' signifies plants grown by these local growers. All of these local plants are hand-planted and hand-dug. All are grown with some combination of compost, cover cropping and crop rotation. The largest of these nurseries is three acres; the average being about three-quarters of an acre. As we work to involve more small Maine nurseries, we are increasing our selection of locally grown plants, especially heirloom and hard-to-find selections. If you ask, we'll tell you the origin of a particular item.

Check out our Web site: **www.fedcoseeds.com**. There is a link to Fedco Trees. We plan to post a wide range of useful and interesting information. If you have ideas for what we should include, please let us know.

We do special orders. If you wish to buy large quantities of any item, larger or smaller plants than we are listing, rooted cuttings, or unusual items we're not listing, please write with particulars.

Please share your experiences growing plants with us. Many of our selections originated from your suggestions. If you know of something growing near you we should be offering, or if you are interested in growing for us, please write to us. We are part of Fedco Seeds, a consumer/worker cooperative. We welcome your comments, suggestions, and ideas. Thank you for your support.

John Bunker & Susan Kiralis

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We guarantee the quality of our trees and plants, and warrant that all items we offer are fully satisfactory.
If you are dissatisfied for any reason, we will replace the item or refund the purchase price.
Please inspect your order upon receipt and use the correction sheet to notify us immediately of any problems. Because good results depend upon weather, soil and cultural practices over which we have no control, we limit our liability in all instances to the purchase price. The liability of Fedco Seeds, Inc., for breach of warranty, or any loss or damages arising out of the purchase or use of our products, including loss or damages resulting from any negligence whatsoever on our part, or strict liability in tort, shall be limited to the purchase price. By acceptance of the merchandise, the buyer acknowledges that the limitations and disclaimers herein described are conditions of sale, and that they constitute the entire agreement between the parties regarding any warranty or liability. Claims for any defects in Fedco's products should be presented to Fedco as soon as possible after discovery. Failure to assert claims within 30 days after discovery renders this warranty null and void.

Ordering Information—

The order forms - Order items from this catalog on a Trees 2004 order form, in the center of the catalog; you may submit as many pages as you need, either photocopies, forms downloaded from our website or printouts mimicking our format. To encourage you to participate in a group order and to order early, we give discounts.

Payment with check, money order or credit card must accompany all orders. We request that all orders under $25 pay by check or MO. Make your check out to Fedco. We accept Visa and MasterCard and will bill your credit card when we receive your order. We will bill or refund you for any adjustments as each order is completed.

Mail your order to **Fedco Trees, PO Box 520, Waterville, ME 04903-0520.** Keep a copy of your order for your records. To confirm receipt of your order, enclose a stamped self-addressed postcard.

Or **fax** your order to (207) 872-8317. Fax orders pay a $2 handling fee. **We do not take phone orders.**

Group orders: mail us at one time all the order forms from your group members with one payment and we will ship all the orders, packaged individually, to one address. The group total earns the discount. Use the front of an order form for a group address and payment cover sheet. We recommend making a copy of each group member's order before you send the batch to us.

Maine sales tax - for **Maine residents only.** Please add 5% sales tax. State law does not exempt shrubs, trees, seedlings or plants, even those producing food.

We charge **$10 for handling if you adjust your order**. Additions, deletions and cancellations are costly for us to process. You are welcome to place as many separate orders as you wish.

We will offer surplus for sale at the Tree Sale. Sometimes we have stock left over after the Tree Sale, but never after May 15th, when we shut down completely and go home to plant.

New this year: our **planting guide** is incorporated into the catalog. **Save your catalog** for planting and cultural instructions. We will not send planting guides with orders unless you request them.

Our Variety Descriptions–

All trees and plants are bare-rooted (except where noted), and even a large order can fit into a station wagon. All fruit and nut trees are well-rooted, 1/4-7/8" in diameter.

Fruit trees are grafted onto the hardiest standard-sized rootstocks available, except where noted. Standard trees are stronger rooted, hardier, and longer lived than dwarf or semi-dwarf trees. If you want a smaller tree, keep it pruned.

For fruit trees and berries, the **exact dates of peak ripeness** will vary from place to place.

The **zone hardiness rating** will aid you in determining whether a plant will be hardy for you. The average minimum temperature in your area determines your zone. See the chart below. Apple descriptions have minimum *and* maximum zones because apples typically need cold climates to produce the best fruit. Your own soil conditions, micro-climate and topography will be equally important in determining the best varieties for you.

Please note **pollination** requirements for fruits, nuts and berries. Some plants are self-pollinating, others require a second plant for pollination, and others require a plant of a second variety.

We strive to give you accurate information about all the plants we sell. If you notice inaccuracies, please let us know.

John writes the tree and shrub descriptions and Susan writes tender bulb and perennial descriptions.

Statements about medicinal uses of plants have not been evaluated by the FDA, and should not be used for the diagnosis, treatment, cure or prevention of any ailment. Before using or ingesting any medicinal plant, consult a healthcare practitioner familiar with botanical medicine.

USDA Hardiness Zone	Average Minimum Temperature
2	-50˚ to -40˚
3	-40˚ to -30˚
4	-30˚ to -20˚
5	-20˚ to -10˚
6	-10˚ to 0˚

Discounts & Deadlines—

Discount deadline is **Friday, December 12, 2003**. Sorry, no volume discounts on later orders. Discounts apply only to orders shipped to one address.

over $200	10% discount
over $400	15% discount

Special discounts may be available for very large orders; please call (207) 873-7333 for a quote.

We fill all orders on a first-come first-served basis.

Final order deadline is **March 5, 2004.**

Shipping & Pickup—

We ship most orders **via UPS beginning in April**, and continue throughout the month, timed according to planting zone. Our last ship date is April 28. Please do not ask us to ship after that.

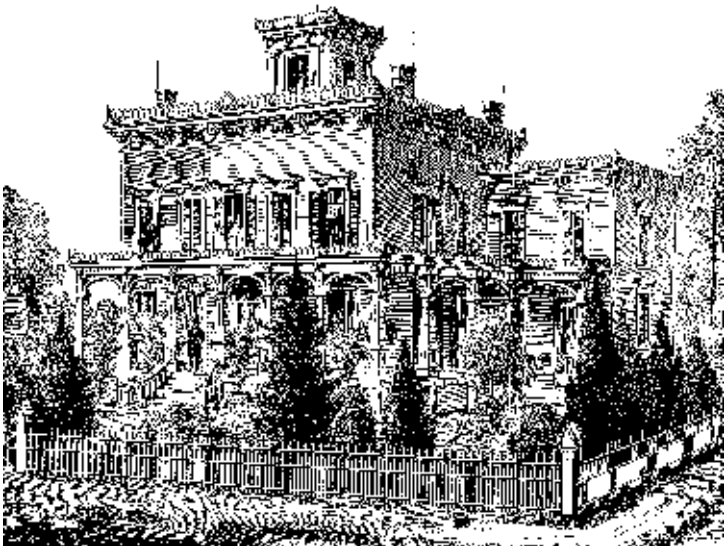
Shipping charges: All orders to be shipped pay a $4 box charge in addition to shipping. Shipping is 10% with the following minimums.

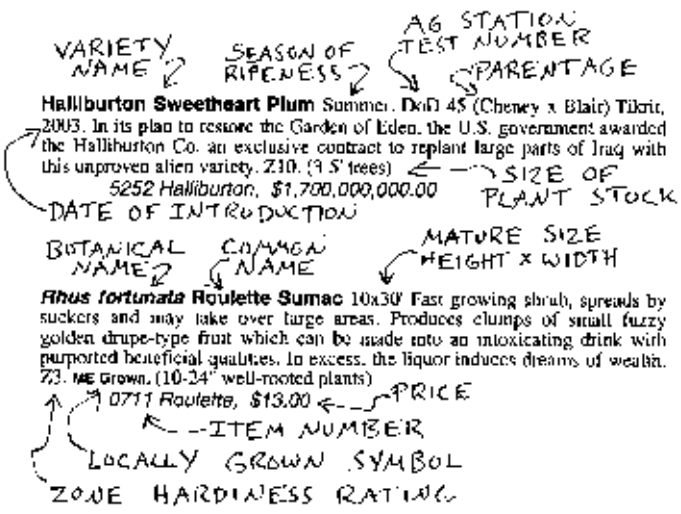
area	minimum charge
New England	$7.00
NY, NJ and PA	$9.00
all other states	$14.00

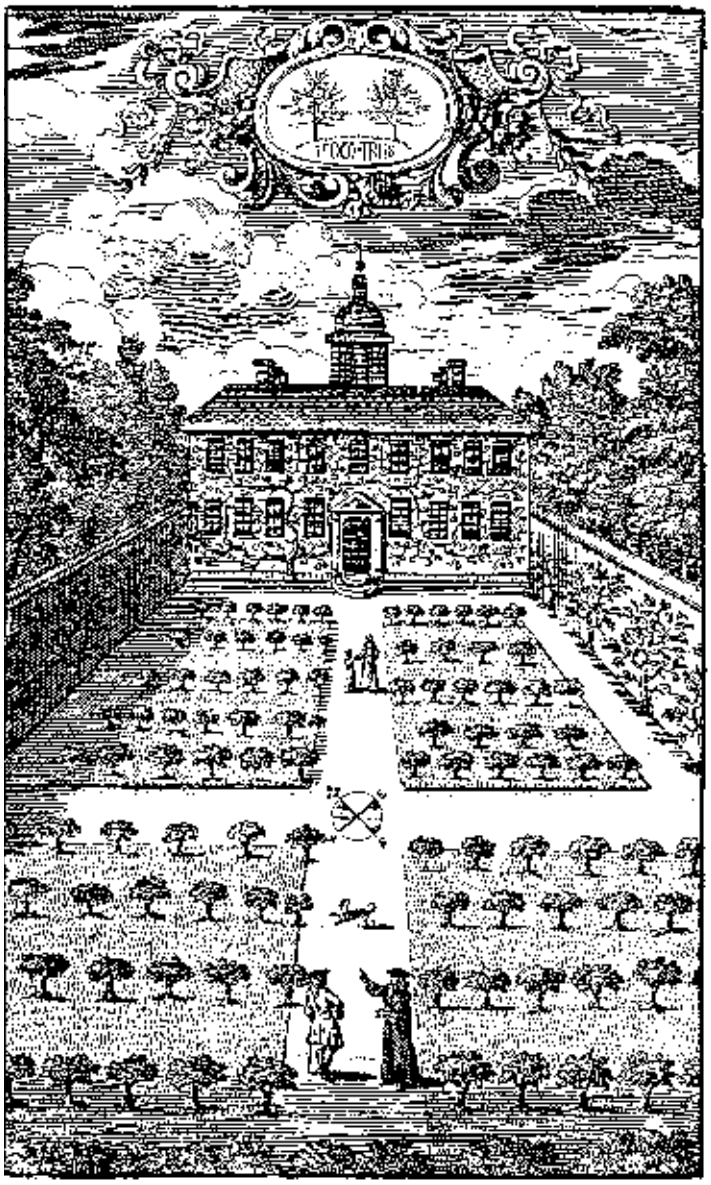
We ship to Alaska via Priority Mail; include 20% for shipping (minimum $14) and supply a postal address.

If you request a particular ship date we charge $10 to cover our extra administrative costs.

Pick your order up at our warehouse in Clinton, Maine, during our annual **Tree Sale**. Fri and Sat, April 30–May 1, are reserved for preorder customers. The public is welcome on Friday and Saturday, May 7–8. We ask preorder customers to come on April 30 or May 1, shop at the full Tree Sale and avoid the crowds. We will send you a pickup reminder and map in April. You may pay a 50% deposit, with the balance due at pickup.




VARIETY NAME
SEASON OF RIPENESS
AG STATION TEST NUMBER
PARENTAGE
Halliburton Sweetheart Plum Summer. Dell 45 (Cheney x Blair) Tikrit, 2003. In its plan to restore the Garden of Eden, the U.S. government awarded the Halliburton Co. an exclusive contract to replant large parts of Iraq with this unproven alien variety. Z10. (9 5' trees)
5252 Halliburton, $1,700,000,000.00
SIZE OF PLANT STOCK
DATE OF INTRODUCTION
BOTANICAL NAME
COMMON NAME
MATURE SIZE HEIGHT x WIDTH
Rhus fortunata Roulette Sumac 10x30' Fast growing shrub, spreads by suckers and may take over large areas. Produces clumps of small fuzzy golden drupe-type fruit which can be made into an intoxicating drink with purported beneficial qualities. In excess, the liquor induces dreams of wealth. Z3. ME Grown. (10-24" well-rooted plants)
0711 Roulette, $13.00
PRICE
ITEM NUMBER
LOCALLY GROWN SYMBOL
ZONE HARDINESS RATING



FRUIT TREES AND BERRIES

Choosing a Site for Fruit Trees and Berries

The best sites for fruit crops have well-drained fertile soils, protection from wind, good air drainage, and full sun. A gentle slope and six to eight hours of full sun per day is ideal. Good air flow will moderate frosts and fungal disease. If possible, avoid "frost pockets."

Sunny south- or west-facing slopes are not advisable for less hardy varieties. These slopes tend to warm up before the danger of frost has passed. Trees may flower prematurely and then be damaged by frost, causing loss of fruit. South and west slopes may also have widely fluctuating early spring temperatures that can damage less hardy trees.

Soil pH for fruit trees should be between 5.5 and 8.0, towards the lower end for apples, the higher end for peaches, and in the middle for others. Fruit species have optimal space requirements. See chart on right.

Do not plant trees where power lines will interfere with them.

Magnetic Alignment

Orchardist Michael Phillips writes, "Here's one tip from an old-time South Carolina peach grower: Nursery stock when barerooted for planting shows a definite dominant lateral root. Supposedly this root grew in response to the magnetic field of the earth. Trees planted out in the orchard with this dominant root aligned towards the magnetic pole will assure the tree continues to grow in alignment with the sun the same way it did in the nursery. This fellow swore such planted trees took off far, far better."

Fall Preparation or Spring Initial Feeding for Fruit Trees

If you're interested in preparing locations for your trees this fall, or for feeding newly planted fruit trees, the following amendment recipe should address most sites in the eastern U.S., which tend to be acidic, and moderate to low in calcium and phosphorus. You can apply this mix as a mulch to your newly planted tree in the spring. To order any of these products, refer to the Organic Growers Supply section of our Seed catalog.

Deluxe Method

Without digging the hole, cover an area 4-6' in diameter with:

- 5 lbs aragonite (long-term calcium)
- 5 lbs colloidal phosphate (short-term calcium and phosphorus)
- 5 lbs azomite (long-term minerals and trace minerals)
- 5 lbs granite meal or greensand (for improved soil texture)
- 2-3 lbs menafee humates (aids mineral and rock-powder breakdown)
- 2-3 lbs greenstone (aids plants in nutrient uptake)

For building high levels of humus, also add:

- 2 lbs alfalfa meal
- 2 lbs bone meal
- 2 lbs kelp meal
- 2 lbs blood meal
- 100 lbs compost (1/8 yard)
- BioDynamic preps (optional)

Cover with a 3-4" mulch of lawn clippings, leaves or "brush" chips, which will smother the sod, conserve moisture, prevent leaching, and provide a habitat for soil organisms to break down the recipe. In the spring, pull back the mulch and dig your tree hole, incorporating the mineral supplements and compost into the backfill.

Simpler Method

Forgo the soil amendments and simply pile 1-2 wheelbarrow loads of compost on each planting-hole site. If you live by the ocean, add a couple of wheelbarrows of seaweed. Then cover with mulch. In the spring, pull back the mulch and plant your tree, incorporating the compost into the hole as you dig.

Feeding older fruit trees

Cover the surface of the ground out to the drip line with the same materials listed above. For larger trees (five years and older) increase the mineral amount to 10-15 pounds each. For ancient trees you can add up to 25 lbs of each mineral in a ring beneath the drip line. Mulch as described above.

Plant Spacing of Fruit Trees and Berries

	between plants	between rows
Apples, Semi-dwarf	15'	15'
Apples, Standard	25-30'	25-30'
Asparagus	1-2'	4'
Blackberries	3-4'	6-12'
Blueberries, highbush	3-6'	8-10'
Blueberries, lowbush	1'	1'
Filazel	4'	hedge
Grapes	8'	8-10'
Kiwis	10'	10'
Nut trees - orchard	35'	35'
Nut trees - forest	20'	20'
Pears, Asian Pears	20'	20'
Raspberries	2'	6-12'
Stone Fruit	15-20'	15-20'
Strawberries	see instructions	
Sweet Cherries	25'	25'

TREE PLANTING AND CARE

The basics of tree care are outlined here and are designed to get you going. Obviously we can't possibly tell you everything you need to know in a few pages. Additional information, such as location and soil preferences about specific plants, is in the item descriptions. Reading, observation, trial and error, and talking with other growers and extension agents can expand your knowledge of trees and shrubs. A soil test is useful in determining the specific needs of your site.

Consult the Fedco Seeds catalog book list for some recommended reference books, or look for information on the internet. There are many useful links at our website, www.fedcoseeds.com.

Immediate Care

When your new trees and plants arrive they are breaking dormancy and need to be planted as soon as possible. The longer they remain unplanted, the more stressed they become and the longer their recovery will take.

DO NOT ALLOW ROOTS TO DRY OUT AT ALL!!!

If You Intend To Plant Trees & Shrubs Within 48 Hours

Leave the plastic wrapping around the root ball. Add some water to remoisten the packing material and store your trees/plants in a cool shaded place like a shed, barn or cellar. Avoid heat and sunlight.

If You Cannot Plant Your Trees Within 48 Hours

You may keep plants for a week or two by following one of two temporary measures and continuing to water trees when they need it.

1) Remove the plastic wrap around the root ball. Store plants in a cool shaded place. Wrap the roots in wet shredded newspaper or sawdust, packing firmly to eliminate air pockets. Water thoroughly.

2) "Heel in" your plants. Dig a trench or turn back an appropriate amount of earth and bury roots; tamp firmly to remove air pockets. Water thoroughly.

Asparagus

Open up asparagus roots and store dry and uncovered in a cool shaded place.

Strawberries

Refrigerate strawberry plants until you are ready to plant them.

Perennials

Open bags and check the stock immediately. Roots and crowns should be firm and pliable, not squishy or brittle. If they are slightly dry, add a little water or, if they are going to be potted up soon, soak the roots. Generally, a little surface mold is harmless and will not affect the plant's future performance. If you cannot pot them up immediately, store them in a cool (35-40˚) location for a short time. See page 45 for details.

Sweating Nursery Stock

Some trees and shrubs become extremely dormant during refrigerated storage. These include: Amelanchier (juneberry), Betula (birch), Celtis (hackberry), Cercis (redbud), Crataegus (hawthorne), Morus (mulberry), Quercus (oak), and Potentilla (cinquefoil).

Sweating nursery stock is easy and ensures breaking of dormancy. Lay the trees in a shady place, 45-70˚, such as a garage, basement, barn, greenhouse, or outdoors in the shade. Cover the whole plant with very damp packing material (hay, newspaper, etc.) followed by a sheet of plastic. Sweating will take several days; check the buds every day. The trees are ready to plant when the buds begin to swell.

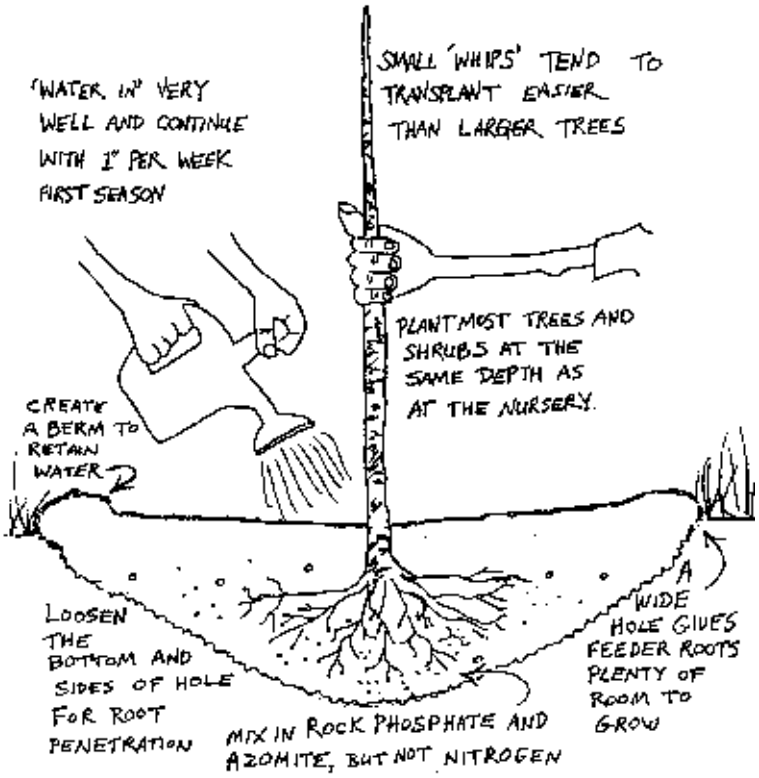
Warm May weather will give the best results. Until then, heel your trees in, or store them with roots covered in a cool barn or garage.

General Planting Directions for Trees and Shrubs

Dig a large hole, at least twice as wide and about as deep as the root system. Most roots grow laterally and need plenty of room to spread out. Your trees will benefit if the hole is at least 3' wide. Loosen up the soil at the bottom of the hole and especially around the sides. For fruit trees, you may add a 3-pound bag of our planting mix, or well-aged compost and mineral fertilizers such as rock phosphate, but not manure or other nitrogen sources. We add about a coffee-can of rock phosphate for each fruit tree. You may also add a handful of azomite at this time. Replace the topsoil around the roots where it will do the most good. If you situate non-fruit trees according to their requirements, there is no need to add any supplements to your soil. This is the best way to ensure that your plants will thrive for many years.

For best results plant on cool cloudy days in the early morning or late afternoon. Soak deciduous trees and shrubs for up to 24 hours before planting. Keep the roots from drying out. Even a few minutes in the sun and breeze can kill a tree or shrub. Keep them in a bucket of water as you plant.

Generally you should plant trees and shrubs at the same depth that they grew in the nursery. Plant semi-dwarf or dwarf fruit trees with the graft 2" above ground level. Spread the roots out as you set the trees in the holes. Make a mound at the bottom of the hole over which to spread the roots. Give your trees plenty of water to "puddle in" as you plant. Wiggle the trunk as the water seeps in to ensure that the roots are settled in with no air pockets. Leave a berm around each tree so that water will seep in and not run off. Keep them well watered throughout the first summer. They will require the equivalent of 1-2" rain per week. A good soaking is effective; sprinkling is not.


'WATER IN' VERY WELL AND CONTINUE WITH 1" PER WEEK FIRST SEASON
SMALL 'WHIPS' TEND TO TRANSPLANT EASIER THAN LARGER TREES
PLANT MOST TREES AND SHRUBS AT THE SAME DEPTH AS AT THE NURSERY.
CREATE A BERM TO RETAIN WATER
LOOSEN THE BOTTOM AND SIDES OF HOLE FOR ROOT PENETRATION
MIX IN ROCK PHOSPHATE AND AZOMITE, BUT NOT NITROGEN
A WIDE HOLE GIVES FEEDER ROOTS PLENTY OF ROOM TO GROW

Initial Pruning

Prune dead or injured branches and roots on all trees and shrubs. Further pruning of most trees is not necessary at planting time. Do not prune tops or prune or bend tap roots of nut trees. Specific preplanting pruning requirements for small fruits and some ornamentals is noted in their respective sections and more general information on pruning begins on p. 36. Confers (p. 28) and roses (p. 40) require special pruning. See their sections for details.

Pruning Fruit Trees

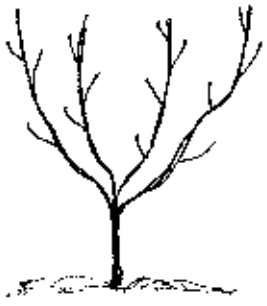
Avoid pruning young trees except to establish a basic shape. Pruning young trees delays bearing. On apple and pear trees, leave the central leader alone and let it grow. It's ok to cut off extra trunks and large branches. On peaches and plums, the trees may want to develop 2-4 leaders, or an open-vase shape. Always prune just above a good strong bud that faces a direction you'd like your plant to grow.

Once the tree begins to bear you will want to prune annually. Good pruning brings sunlight to all parts of your tree. Maximum sunlight encourages more and higher quality fruit. Sunlight also encourages fruit buds to form for next year's crop. A well-pruned tree will produce larger fruit and will tend toward more annual bearing. Good pruning discourages fungal diseases and promotes greater spray penetration. There's an old saying that a bird should be able to fly through your fruit tree. Any good book on growing fruit trees will provide you all the information you need. Pruning is not difficult to do and will make a huge difference.

Most pruning should be done in late winter or early spring, although some say the best time to prune is when you have your clippers in your hand. We recommend a good-quality pair of hand shears and a lightweight pruning saw. You may also wish to invest in long-handled loppers, a pole pruner or a pole saw. Keep your pruning tools sharp for smooth, clean cuts.

Consult old and new books as well as orcharding articles and develop a system that works for you.

Weeping crabapples require special pruning. See p. 35 for instuctions.



OPEN VASE

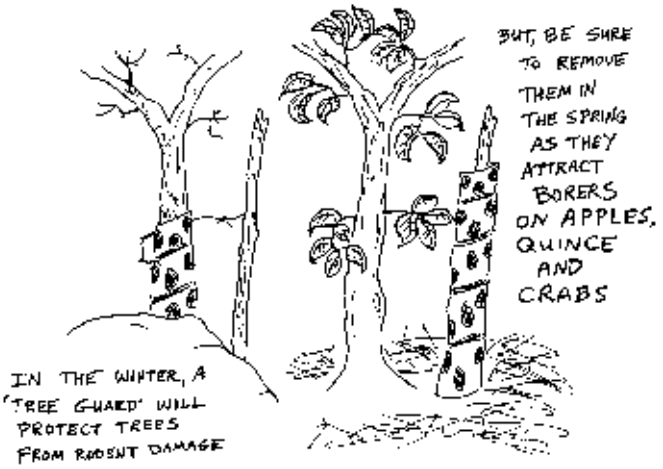
CENTRAL LEADER

Mulch

Keep weeds and especially grass away from new trees and shrubs. Apply a 2-4" mulch of composted material, leaves, wood chips or hay out as far as the drip line. A 1/2-1" topdressing of alfalfa meal beneath the mulch may substantially reduce transplant shock. Keep mulch back several inches from the tree trunks. We lay down cardboard or newspaper and spread mulch on top of it. Mulch encourages earthworms, holds moisture, keeps down weeds, insulates against excess heat and cold, aerates and loosens soils, builds humus and fertilizes feeder roots, 90% of which are within 6" of the surface.

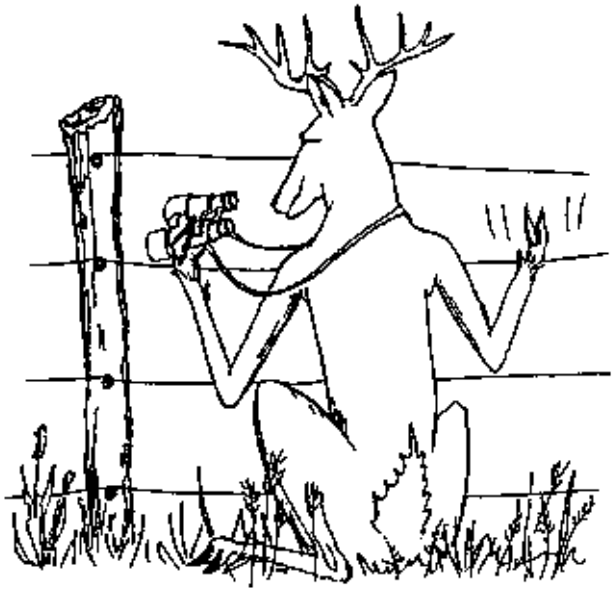
Staking

Newly planted standard-sized fruit trees and ornamental trees seldom need staking. Dwarf trees require staking. Semi-dwarfs may require staking. If your tree is in a very windy site or develops a leaning habit, staking may help. Drive a stout post near the tree. Wrap the tree trunk with a scrap of burlap or rubber to protect against abrasion. Secure the wrapped part of the tree to the post with string or wire. Tie tree somewhat loosely, as a slight rocking motion will encourage rooting. Once roots are well anchored, the stake may not be needed. Mark small trees with a stake with ribbons to warn operators of lawn mowers, tractors, cars and skidders.


BUT, BE SURE TO REMOVE THEM IN THE SPRING AS THEY ATTRACT BORERS ON APPLES, QUINCE AND CRABS
IN THE WINTER, A 'TREE GUARD' WILL PROTECT TREES FROM RODENT DAMAGE

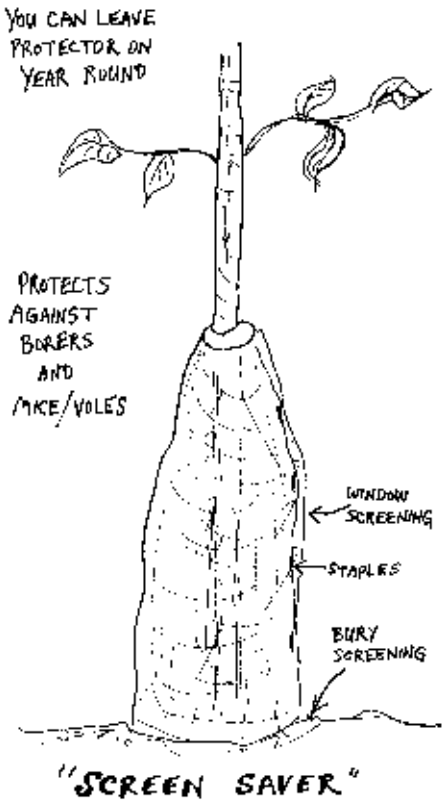
Mouse/Vole Protection

Fruit trees and ornamentals are sometimes girdled by mice or voles. Girdling will usually kill the tree or shrub. The danger is greatest in winter. A wrap of window screening (Screen Saver, next page) or a plastic spiral tree guard will protect your tree from being girdled. If you use plastic spiral tree guards on apple, quince or crabapple trees, remove them from April to October, as they attract borers if left on the tree in the summer. You can leave plastic spiral tree guards on most other trees year-round.



Oh Dear, Deer!

The best deer protection is a collie in the yard. If you don't have a dog or if your orchard is too far from the house, an 8' sheep fence will work. Some people have good luck with electric fences. Small protective fence enclosures can be made by circling your tree with a cylinder of chicken wire or other fencing.



Beware of the Apple Borer !
Try a Screen Saver !

In most locations the Roundheaded Appletree Borer (*Saperda candida*) is **the number one enemy** of young **apple**, **crabapple** and **quince** trees. If you are growing young apple trees, you must protect your trees from this pest. If you don't know if they are a problem in your area, check with any grower near you. They'll know. Otherwise, err on the side of caution. The borer does not endanger other fruit trees or ornamentals.

The borer beetle lays its eggs under the bark near the base of the tree. The developing larvae tunnel through the wood, eventually weakening the tree until it crumbles and falls over. The trouble sign is small deposits of orange sawdust, called frass, at the base of the tree, usually appearing in June or July. Left unchecked, borers usually mean death for your trees.

Borers thrive in shady moist warm environments. Keep grass back at least 6" from the tree base. One good borer deterrent is a homemade protector. Wrap window screening around the tree trunk. Add a soft foam collar "gasket" at the top, to prevent the adult borer beetle from sneaking down behind the screen to lay its eggs. Staple the screening snug at the top and along the seam or tie it with wire. Push the screening 1-2" down into the soil. (Optional: Smear Tangletrap on the gasket to increase the deterrent.) Be sure to loosen the screening as the tree grows. Because borers occasionally sting the tree *through* the screen where it touches the trunk, you should remove screen once a summer and look for signs of infestation. With this "screen saver" you should never have a borer problem.

You may leave this screening on your tree year round. Every so often adjust the top to be snug but not girdling your tree, and fasten the seam so borers will not enter through the side.

Borers are most prevalent in June and July. If you do not have screen savers, look for the frass, the sawdust. Locate the hole or soft spot in the trunk and insert a wire until you locate and kill the larvae. Cut away soft, spongy pockets with your knife. Even serious carving is less harmful to the tree than leaving the larvae alive inside.

Another option is to paint the tree trunk from the ground up to about 30" with white interior latex paint. Thin the paint to about 3/4 strength. Then, if available, add hydrated lime and kaolin clay (or Surround) to thicken the paint to about the original consistency. This mix will help deter borers. It will also make for easy detection of any infestation you may have. Look for the frass!

ON THE WEB

Fedco Trees can be found on the Web at **www.fedcoseeds.com**. Visit us throughout the year for event listings, planting instructions and links to other plant Web sites. During pre-order season you'll find current information on the availability of catalog items.

You are also welcome to email us at **trees@fedcoseeds.com**.

The Borer War

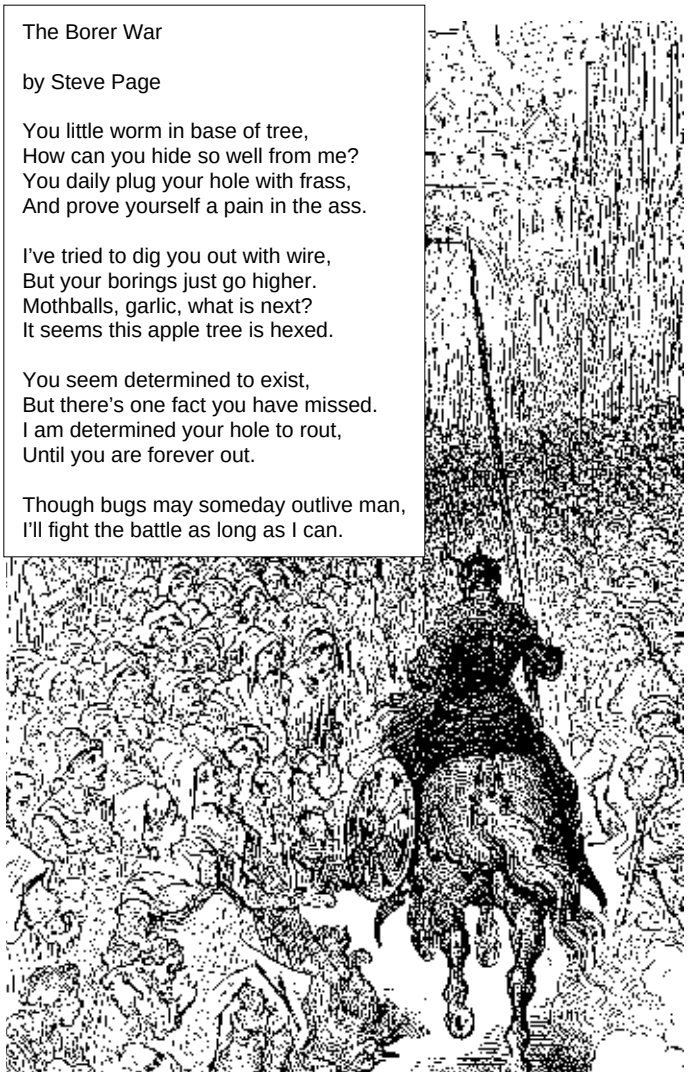
by Steve Page

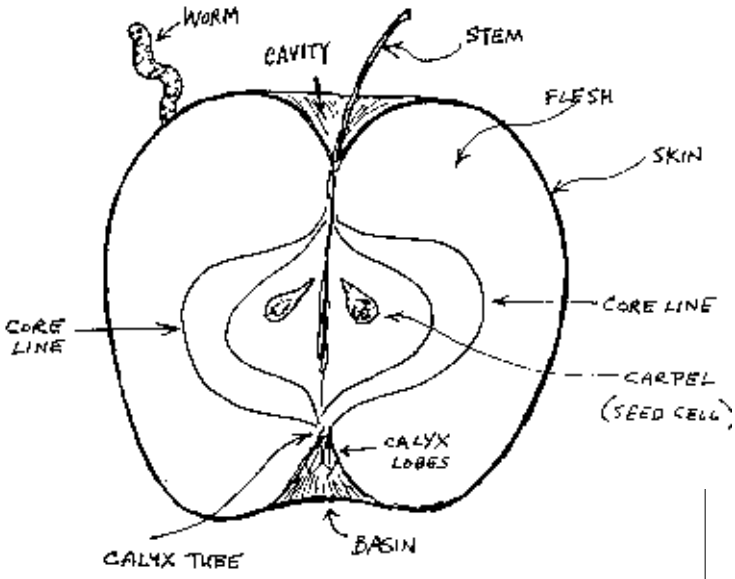
You little worm in base of tree,
How can you hide so well from me?
You daily plug your hole with frass,
And prove yourself a pain in the ass.

I've tried to dig you out with wire,
But your borings just go higher.
Mothballs, garlic, what is next?
It seems this apple tree is hexed.

You seem determined to exist,
But there's one fact you have missed.
I am determined your hole to rout,
Until you are forever out.

Though bugs may someday outlive man,
I'll fight the battle as long as I can.





Apples *Malus* spp. probably originated in Kazakhstan where vast apple forests still thrive. The fruit traveled west via the great Silk Route and eventually to America on European ships. Until the mid-nineteenth century, most European settlers planted seedling trees. There were hundreds of thousands of seedling apple orchards in the eastern U.S. creating one of the greatest—though largely unintentional—breeding experiments ever conducted. From those orchards come many of our most famous varieties, a fraction of which we offer each year.

Some definitions: **Summer apples** ripen in summer, are crisp only for a short period, do not store well, and are best used for cooking. **Fall apples** store longer and are useful for a wide variety of purposes. **Winter apples** ripen mid to late fall, store well, and reach their best flavor after weeks, or even months, of storage. **Dessert apples** are delicious eaten raw. **Subacid** means tart! **Russet** or **russeting** is a skin texture (fairly common on apple varieties and characteristic of a few pears and potatoes) which looks and feels somewhat like suede. These brownish roughened areas do not affect the taste of the fruit. Many "russets" are delicious and quite beautiful apples. **Bloom** is a naturally occurring dust-like film on the skin of some varieties of apples, plums and grapes.

Each variety has a climate range where it will thrive and produce its best fruit. At the end of each apple description you'll find a range of zones listed. For example, Z3-4 signifies that this apple will reach perfection in Zones 3 and 4 and that we don't recommend it farther south even though it would be plenty hardy. Z4-6 means that this apple will reach perfection in Zones 4, 5 or 6. We suggest that you use this guide to select apple varieties most appropriate to your area.

This year we are offering one variety, Liberty #**0437**, on M111 semi-dwarf rootstock which is hardy in Zone 4 and produces a tree about 80% of standard size. M111 is quite rugged and tolerates dry conditions better than most rootstocks. We prefer standard (full-sized) rootstocks and all the rest of our fruit trees, except the cider apples, are standards.

Although standard-sized apple trees may be planted as close as 10-15' apart, they were typically planted 30' apart in 19th century orchards. We generally plant trees 20-25' apart with good results.

Apple trees are adaptable to a variety of soils and climates, though they prefer well-drained fertile soil. See pages 4-5 for information on soil preparation and planting. Varieties bearing annually are noted; others normally bear every other year. **All apple trees require a second variety for pollination**, but any apple within a quarter mile will probably do. (3½-6' trees)

Adams Pearmain Fall. Herefordshire, England, about 1826. Highly flavored rich juicy spicy aromatic firm fruit for fresh eating, cider and salads. Medium-sized perfectly conic deep red to scarlet striped and conspicuously dotted and mottled with russet. At the annual Stump Sprouts apple growers meeting in western Massachusetts a few years ago, growers were asked to name their favorite varieties. Ike Kirschner of Pennsylvania raved about Adams. Our scionwood comes from his trees. Although it showed no dieback here in Palermo this past winter at -30°, I don't have a firm sense of how hardy it will be in northern New England. Moderately vigorous spreading tree. Blooms mid-season. Zone 4?-6. **ME Grown.**

0004 Adams Pearmain, $16.00

Baldwin Winter. Wilmington, MA, about 1740. Also called **Butters Apple** or **Woodpecker**. Discovered on the Butters Farm by a surveyor planning the Middlesex Canal and noted as a favorite site for local woodpeckers. Scions from the original tree were grafted and growing in Maine by 1810, and by 1850 Baldwin was the standard home and commercial variety wherever it was grown. It remained dominant in Maine until the terrible winter of 1934 when tens of thousands of trees perished and McIntosh became king. Large round-conic thick-skinned fruit. Light yellow skin almost entirely blushed, mottled and striped with red and deep carmine. Hard crisp juicy yellowish flesh makes excellent eating and keeps till spring. Vigorous adaptable hugely productive long-lived healthy tree. Hardiest in well-drained upland and north slopes. Massachusetts' most famous apple where it grows to perfection. Also extremely nice here in central Maine. Blooms early. Z4-6. **ME Grown.**

0035 Baldwin, $16.00

Black Oxford Winter. Unknown parentage. Paris, Oxford County, ME, about 1790. This outstanding apple, a favorite long ago around much of Maine, has been making a huge comeback in the last 20 years. Our best seller. Medium-sized round fruit, deep purple with a blackish bloom. I doubt if there was ever a more beautiful apple. A 200-year-old Black Oxford tree still grows in Hallowell, and still bears large crops. Excellent cooking, superb late cider. Best eating late December to March. Good cooking until early summer. Some insect and disease resistance. Becoming less rare every year! Blooms late. Z3-5. **ME Grown.**

0050 Black Oxford, $16.00

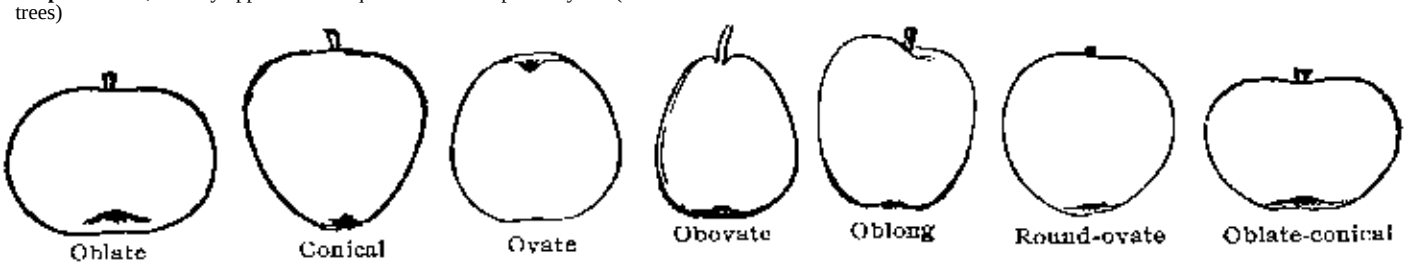
Briggs Auburn Fall-Winter. Introduced by John C Briggs of Auburn, Maine, before 1850. One of Fedco's recent reintroductions and one of my favorites. I had been attempting to identify a wonderful yellow apple *and* locate Briggs Auburn for years. Then in October of 2001 I had a major epiphany and realized that they were one and the same. Large round-oblate clear yellow fruit with glowing greenish shading and a slight blush. All-purpose apple with a bright well-balanced flavor including hints of banana and blackberry. Superior fresh eating well into winter and top-notch cooking. Peel the chewy skin and it's highly aromatic. Produces a thick creamy golden-yellow medium-sweet apple sauce. No sugar necessary. Excellent in oatmeal. In a pie, the slices lose their shape but the crust won't sink and pie doesn't get watery. Medium-large annually bearing productive tree. Our scionwood comes from an old orchard near Belfast. We have also now tentatively identified a second tree on the coast near Brunswick. Z4-5. **ME Grown.**

0068 Briggs Auburn, $16.00

Centennial Late Summer. MN 1472 (Dolgo x Wealthy). U Minn, l957. Unusually high-quality very small eating crab with a long stem and oval shape. Shiny smooth mottled red-pink-orange-yellow skin with a thin purplish blush. Tender crisp juicy slightly spicy tart light orange flesh. It's hard to believe an apple that small can taste that good. Not sweet. Outstanding fresh eating or sauce. Fill your pockets with them and hand them out like candy. Productive naturally small very hardy compact tree named in honor of Minnesota's admission to the Union in 1858. Highly scab resistant. Z2-3. **ME Grown.**

0090 Centennial, $16.00

ME Grown = grown in Maine by a member of the Fedco growers coop



Chestnut Late Summer-Early Fall. MN 240 (Malinda x open-pollinated) U Minn, 1946. An eating crab with truly excellent fruit for fresh eating, pickles and sauce. 2" yellow and bronze-red apple with some russeting. Firm crisp juicy fine-grained very sweet yellowish flesh. Always scores very high at our Common Ground Country Fair taste tests. The last couple of years we have put out a bushel at the Fedco booth and watched them disappear. A lot of people love this apple. For others, despite its crispness and depth of flavor, it is *too* sweet. Sort of the apple version of Sun Gold tomatoes. Chestnut alone with no sugar makes a sweet and subtle sauce. Not a keeper, but can be stored for a month or two. Vigorous somewhat weeping medium-sized productive tree. Disease resistant. Also beautiful in bloom, mid-late season. Z3-5. **ME Grown.**

0101 Chestnut, $16.00

Cortland Fall-Winter. Ben Davis x McIntosh. NY Stn, 1915. A cross between two commercial giants at the time, one (Ben Davis) on the way out and the other (McIntosh) on the way in. Although never as important as McIntosh (#**0478**), Cortland remains a very popular apple throughout northern New England even in this era of many new introductions. Medium to medium-large slightly ribbed dull red fruit with a purple blush. Excellent eating and cooking. Slow-oxidizing white flesh is very good in salads; fine-grained, crisp, tender, juicy. Vigorous tall upright spreading tree with reddish bark. Annual producer of heavy crops. Bears young; remove fruit for the first year or two to avoid stunting growth. Blooms midseason. Z4-5. **ME Grown.**

0110 Cortland, $16.00

Cox's Orange Pippin Fall. Possibly a seedling of Ribston Pippin. Near Slough, Bucks, England, around 1825. Deservedly one of the most famous of all apples. Not only one of the best eating apples ever but also the parent of many other great varieties. Medium-sized all-purpose aromatic fruit is red-orange to red with russet striping and wash. Perfectly balanced slightly subacid flavor and crisp juicy tender flesh improve with storage. Moderately vigorous moderately productive tree bears young and annually. Prefers cooler climates and higher pH (6.5-7.5+). Scab resistant. Blooms midseason. Z4-6. **ME Grown.**

0115 Cox's Orange Pippin, $16.00

Duchess of Oldenburg Late Summer. Russia, 17th century. Also called **Duchess**. In 1835 the Massachusetts Horticultural Society imported the first four of many apple varieties to the U.S. from Russia. These were Alexander, Tetofsky, Red Astrichan and Duchess of Oldenburg. Duchess was soon planted extensively wherever growers needed extreme hardiness and is still quite popular in most of northern New England. Parent of many varieties including Red Baron (#**0653**). Thought to be the parent of the famous Canadian variety New Brunswicker and parent of Dudley Winter (#**0140**). Medium-sized round red-striped fruit is irregularly splashed and mottled with crimson. Yellow firm fine-grained crisp tender juicy subacid aromatic flesh. Highly esteemed for all sorts of cooking, makes a pie with a tart flavorful zip; Duchess is one of the best pie apples for coldest districts. Prolific precocious small to medium-sized adaptable tree. Our stock is grafted from Warren Moody's ancient tree in Aroostook County, the highest quality Dutchess we've located to date in our northern exploration trips. Blooms early. Z3-4. **ME Grown.**

0134 Duchess of Oldenburg, $16.00

Dudley Winter Fall. Duchess x Hyslop Crab. Castle Hill, ME, about 1877. Also called **Dudley** and **North Star**. We had believed it be a New Brunswicker seedling, but David Forbes found information in the 1892 edition of *Agriculture of Maine* that indicates Dudley's true parentage. Orchardist John Wesley Dudley's daughter Grace planted seeds from a Duchess tree pollinated by a Hyslop crab. Many thanks for bringing this to our attention. The resulting seedling became the most widely planted new variety in the North at the turn of the *last* century and probably the most well-known Maine apple outside the state. Medium-sized roundish slightly flattened fruit is vibrant, shiny buttery yellow, overspread with radiating and striking red stripes and splashes. Firm but tender, juicy aromatic subacid flesh for fresh eating and cooking. In northern areas—where it reaches its prime—it also keeps into winter. In early November last year mine were still sweet and tasty. Small vigorous spreading drooping tree begins bearing young, and crops annually. Our scionwood comes from a small abandoned orchard just north of Castle Hill. Extremely hardy. Blooms early. Natural semi-dwarf. Z3-4. **ME Grown.**

0140 Dudley Winter, $16.00

Early Geniton Summer. England or France or Maine, possibly before 1600. May be the same as the ancient apple **White Joaneting** or **Geneting**. Almost certainly the same as the **Geniton** apple once grown in midcoast Maine and the **Yellow Geniton** referred to in *The Apples of Maine*. Pronounced "Gentian" by old midcoast Mainers. Medium-sized ($2^1/_8$"- $2^3/_4$") very sweet firm round fruit. Yellow skin with a rusty orange blush and numerous small pinpoint russet dots. Suited to very good pies, crisps and a beautiful sauce. Holds its shape in a pie or crisp. Ripens in central Maine in late August or early September. First brought to my attention by Sharon Merrow of Rockland and later by Dana Smith of Hope. The tree Mr. Smith knew of in Appleton is long gone, but the very old tree in Rockland is still producing good crops every other year. At first glance it looks like some prehistoric ancestor of an apple tree with its 5 trunks, upright brushy habit and massive number of thorny fruit spurs. Fragrant showy light pink and white blossom display. Z5-7. **ME Grown.**

0147 Early Geniton, $16.00

Garden Royal Late Summer-Fall. Unknown parentage. Sudbury, MA, about 1790. Eat one and you'll wonder why it isn't planted in every orchard. Offer it in your catalog and strangers will appear and buy you out. It's an apple with a cult following. With good reason. It may be the best-flavored apple I have ever tasted. Small to medium-sized round-conic fruit is deep red with prominent white dots. AJ Downing, in the 1860 edition of his *Fruits and Fruit Trees of America*, calls it "very tender, juicy, rich, vinous, aromatic, a beautiful and excellent fruit." Surprise favorite at the taste test at the September 1999 Common Ground Fair, it came in second only to world renowned Cox's Orange Pippin (#**0115**). Once extremely popular because of its exquisite sweet flavor and commonly found in farm orchards, it didn't fit the commercial orchard mold and fell out of favor. Medium-sized moderately vigorous rounded productive tree. Z4-6. **ME Grown.**

0229 Garden Royal, $16.00

Golden Russet Winter. Uncertain origin. Thought to be from England, New York or New England. The champagne of cider apples, ripening late in fall, when the root cellar has finally cooled off and the best cider is ready to be made. Excellent eating; keeps all winter and well into spring. Round medium-sized hard fruit; uniform in size and shape, softens as winter progresses but maintains its superior sweet flavor. Solid deep yellow *golden* russeted skin. Medium to large vigorous diverging upcurving tree with silvery-green leaves on long willowy branches. Scab resistant. Blooms early to midseason. Zones 4-6. **ME Grown.**

0240 Golden Russet, $16.00

Haralson Winter. MN 90 (Malinda x open-pollinated). U Minn, 1923. One of the earliest introductions from the Minnesota Horticultural Research Center and still the most commonly grown apple in Minnesota. A nearly perfect all-purpose apple for those in northernmost areas. Pleasant sprightly subacid flavor for fresh eating, pies, baking, sauce, freezing and cider. Roundish-conic bright red-striped to mostly solid red fruit, with moderately conspicuous dots and some russeting. White firm crisp juicy flesh. Highly productive and reliable. Harvest in October, keeps until March. Extremely hardy naturally small tree with a strong central leader and well-formed wide-angled branching habit. Because it sets fruit so heavily, thin some of the small apples to ensure larger fruit size and encourage annual cropping. Fruit quality and size also seems to respond noticeably to better soils. Exhibits resistance to apple maggot, codling moth, cedar apple rust, fire blight, and even scab. Blooms late. Zones 3-4. **ME Grown.**

0285 Haralson, $16.00

Hayford Sweet Fall-Winter. Unknown parentage. Maysville, ME, c 1870. Also called **Hartford Sweet** or simply **Hayford**. A popular sweet apple prized long ago in northern Maine where there were very few decent winter apples. Not recommended farther south. Medium-sized blocky barrel-shaped and slightly conic fruit, colored an unusual light creamy opaque yellow, dappled with red-orange flecks, spots, short lines and a fiery blood-red blush. Scattered with brown dots. Fine-grained rich sweet but rather dry flesh. You won't need to worry about the sauce being thin, and no need to add sugar. Its season is from October to January and perhaps even March in Aroostook county. Rediscovered in Presque Isle in 2001 after decades in obscurity with the help of a Fedco *wanted* poster and Steve Miller's exemplary detective work. We rescued the tree just before it was scheduled for the axe. The distinctive and rather stunning tree is quite large and bushy with uniquely small foliage. Z3-4. **ME Grown.**

0293 Hayford, $16.00

Honeycrisp Winter. MN 1711 (Honeygold x Macoun). U Minn, 1991. Medium-large fruit, described as "explosively crisp," mottled and striped red over yellow. Cream-colored flesh is sweet and juicy with hard snapping-crisp texture. Mild aroma and subacid flavor are top quality in September and improve steadily in storage. Unusual because it ripens in early fall yet keeps up to seven months. First of the many excellent University of Minnesota introductions to receive large-scale commercial attention. Probably best planted north of Massachusetts. Has not performed as well in warmer districts. Tends towards annual bearing. Relatively small low-vigor upright spreading tree. Above average scab resistance. Blooms mid-late season. Z3-4.

0327 Honeycrisp, $16.00

Honeygold Winter. MN 1595 (Golden Delicious x Haralson). U Minn, 1970. A Golden Delicious for the north. Large round-to-conic soft golden-yellow bronze-blushed aromatic fruit has crisp and juicy yellow flesh with high-flavored "Golden Delicious" quality. Sometimes the flavor reminds me of a pear. Has a very nice zing to it. All purpose. Myths occasionally circulate about its incredible single-variety cider; they may well be true. Harvest in October. Keeps all winter. The late apple champion Eddie Dupont of Mattawamkeag introduced us to Honeygold and generously provided us with grafting wood from his favorite tree. Medium-sized moderately vigorous moderately open tree. Moderate scab resistance. Blooms midseason. Z3-4.

0330 Honeygold, $16.00

ME Grown = grown in Maine by a member of the Fedco growers coop

Idared Winter. Jonathan x Wagener. Idaho Exp Stn, 1942. A popular all-purpose commercial apple in New England that has a great deal going for it. After hearing about it practically everywhere I went, I finally paid attention to Idared a few years ago. It's delicious fresh eating, cooks well in pies and sauce and keeps until late spring. On the 20th of May this year I pulled one out of the root cellar and it was still firm, tasty and spritely. I was very impressed. Medium-large roundish ever-so-slightly ribbed fruit, almost entirely blushed with a solid bright cheerful "1940s red." The ground color is reminiscent of Jonathan and Prima. Sometimes there's a russet patch around the stem. Firm smooth fine-grained juicy pure white flesh is mildly yet decidedly tart, with enough flavor to distinguish it from the more tasteless sweet inventions of recent times. Annual bearing, small-moderate sized productive tree. Early-blooming. Z4-6. **ME Grown.**

0350 Idared, $16.00

Isaac Newton's Tree Fall. Grantham, Lincolnshire, England, 16th c. Fleeing London's Black Plague in 1665 and returning to his family's small manor at Woolsthorpe in Lincolnshire, Sir Isaac became the world's most famous victim of a falling apple. As the story goes, a pale silvery-green dull-red striped ugly lopsided pear-shaped coarse-textured tart cooking apple fell and struck him on the head. Either the sight of the falling fruit or perhaps the whack itself prompted Newton to describe the law of universal gravitation and change the world forever. When Roger W Babson founded Babson College in Wellsley, MA, he arranged to have a grafted tree planted at the college in April of 1954. We obtained scionwood from the Babson tree through the generosity of the college, where the old naturally semi-dwarf specimen still stands surrounded by a green iron fence, labeled with a bronze plaque. Said to produce a "sweet, delicately flavoured puree." Sometimes thought to be the same as **Flower of Kent**. Z4-7. **ME Grown.**

0360 Isaac Newton's Tree, $16.00

Jonagold Fall. NY 43013-1 (Golden Delicious x Jonathan) NY Stn, 1968. An all-purpose variety grown commercially in central and southern New England. May excel in warmer parts of Maine. Large round-conic yellow fruit mostly covered with light scarlet stripes is sweet, wonderful, firm, crisp, very aromatic. Excels both for fresh eating and for cooking. Makes an especially wonderful applesauce. The mailorder company "Applesource" rates Jonagold's flavor as "A+". Vigorous very productive medium-sized tree has few growing problems. Branches need little training. Should be eaten soon after harvest. Stores only until December. Triploid. Will not pollinate other varieties. Because of its long blooming season it may be more susceptible to fireblight than some varieties. Blooms midseason. Z4?-6. **ME Grown.**

0380 Jonagold, $16.00

Keepsake Winter. MN 1593 (MN 447 x Northern Spy.) U Minn, 1979. A most aptly named apple. Keeps until July. Light yellow very fine-textured flesh is hard, crisp, juicy and sweet. Excellent aromatic flavor, but you must wait at least a month after picking. David Bedford of the Minnesota Horticultural Research Center said, "The completely unique flavor percolates up your nose.…If you can't stand the looks, just close your eyes when you eat it!" The irregular conic medium-sized fruit is almost entirely overlaid with stripes and a wash of very deep red. Moderately vigorous medium-sized tree usually bears annual crops. One enthusiastic northern grower on the North American Fruit Explorers (NAFEX) email discussion group called it, "My most agreeable, reliable, grower overwhelmingly friendly apple. I have to thin the whoopee out of it every year. Big fruit. Big taste. Keepsake! Keepsake! Keepsake!" Reaches its prime in northern New England and the upper midwest. Somewhat resistant to scab. Blooms late. Z3-4. **ME Grown.**

0400 Keepsake, $16.00

King David Fall. Chance seedling, thought to be to Jonathan x Arkansas Black, Washington County, Arkansas, 1893. King David has a reputation as an intensely flavored apple. I agree. I consider it to be *the* most flavorful apple I've eaten. More so even than a perfect Sweet 16. The initial bite is an explosion of flavors. You'll wince. Pineapple, tangerine, lemon, sweet, sour, tart, sharp, aromatic and spicy all rush around simultaneously. I'm reminded of the first time I bit into a piece of sushi slathered in green horseradish. You may see stars. The medium-sized round-oblate-conic fruit is very dark solid maroon—nearly black. The fine juicy flesh is firm yet tender and distinctly yellow. Once grown here and there in Maine orchards. Now mostly forgotten. The tree is vigorous, bears young and regularly. Ripens in the fall and keeps until the beginning of the year. May soften at the core if allowed to overripen on the tree. **ME Grown.**

0409 King David, $16.00

Legace Late Summer-Early Fall. Probably a Duchess seedling. Van Buren, Aroostook County, ME, before 1907. This is one of the best-tasting apples I've sampled on my fruit exploration trips to Aroostook County. Although its true identity is yet to be determined, I'm almost positive it is Legace. So far I've located it on three separate farms. Perfectly fits WM Munson's 1907 description in *Preliminary Notes on the Seedling Apples of Maine*. Ripens in September and keeps for at least another month. Medium-small roundish to slightly conic fruit. Warm buttery-yellow slightly waxy skin, overspread with striking red stripes, dots and splashes radiating out from the stem. Very juicy yellowish flesh has some red along the core line and has a yummy subacid flavor. Not a sweet apple. Medium-sized annually productive tree. No scab. Extremely hardy. Recommended for coldest regions, although we don't know yet if it will ripen in Alaska. On trial now in various locations further south. I'll keep you posted. Z3-4. **ME Grown.**

0430 Legace, $16.00

Liberty Late Summer-Fall. NY 55140-19 [Macoun x PRI 54-12 (PRI Coop complex cross includes Rome Beauty, Jersey Black, McIntosh, Wealthy and *M. floribunda*)]. NY Stn, 1978. Often cited as the best of the disease-resistant varieties, particularly in the Northeast. Somewhat similar to Macoun. A handsome medium-sized round-conic bluish-pinkish-red apple with crisp white flesh of very good dessert quality when dead ripe. Excellent cooking and cider too. Recommended for single-variety cider. Keeps till late fall. Begins fruit production at an early age, bearing consistent heavy annual crops. Naturally well-structured sturdy tree is easy to care for. Considered to be 100% scab immune, though not resistant to insects or other lesser apple diseases. Allowing Liberty to crop too heavily at a young age can stunt final tree size and reduce productivity. Even with mature trees, thinning fruit clusters is important to maintain fruit size. Blooms early to midseason. Z4-5. **ME Grown.**

0436 Liberty, $16.00

Liberty Same as above but on M111 semi-dwarf rootstock. Z4-5. **ME Grown.**

0437 Liberty M111, $16.00

Macoun Fall. McIntosh x Jersey Black. NY Stn, 1923. This is an apple with a near cult following even though practically no one seems to know how to pronounce the name. (It rhymes with town, not tune!) Especially good choice for those who like McIntosh and live south of the Maine border where Macs do not reach their prime. Medium-sized ribbed lobed truncate fruit. Dark purplish-red blush mostly covers the green skin. The very white flesh is crisp but not really hard. The rich flavor is sweet and aromatic. Very juicy. Excellent for fresh eating. Somewhat vigorous, upcurving tree with stout curved branches may require some training. Not tall. Moderately productive. Thinning the young fruit will help maintain larger fruit size. Although susceptible to scab, the fruit appears to be less affected than McIntosh. The fruit also appears to show some natural resistance to insect damage. Blooms mid-late season. Zone 4-6. **ME Grown.**

0453 Macoun, $16.00

Maine 82-56 (ME 8256) Late Summer-Early Fall. Cortland x Northern Spy. Unreleased cross by Russell M Bailey, Monmouth, ME. This very good quality all-purpose apple resembling Cortland was bred by Russ Bailey (1901-1990), head of agricultural research projects at the University of Maine for 35 years and Maine's most famous plant breeder. Responsible for the Northern Pickling Cuke and Brock apple, Bailey also made a number of apple crosses that he never released. For the last few years we've been tracking them down. We located ME 8256 in Waterford with the encouragement and help of Maine orchardist Scott Miller. ME 8256 ripens a couple weeks before McIntosh and keeps well for an early apple. Like the fruit, the tree somewhat resembles Cortland growth habit, although it is not as droopy as Cortland. Z4-6. **ME Grown.**

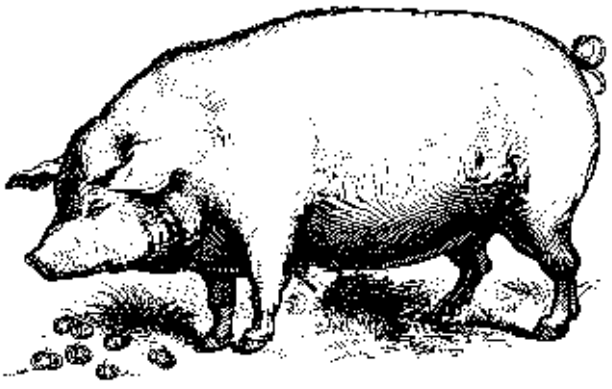
0459 Maine 82-56, $16.00

McIntosh Fall. Thought to be a seedling of Fameuse or perhaps St. Lawrence x Alexander. Dundela, Ontario, 1811. First discovered by John McIntosh on his farm near the St. Lawrence River in 1811. Originally called Granny's Apple, then McIntosh Red, sometimes Gem, and finally McIntosh. Certainly the most important apple in the Northeast. Although not planted in many other locations, it grows to perfection in our cool climate. There are many strains of McIntosh, some striped, some blushed, some solid red. Recent strains have been selected for traits other than flavor, and the variety has gotten a bad reputation. This strain has green ground color overlaid with red stripes and blush. It was planted in about 1910 in Mercer, ME. Many of these trees are still alive and bearing large crops. Of all the strains we have sampled, this one has the best "Mac" taste. This is a delicious aromatic apple. Annual cropper. Large beautifully rounded spreading strong easily managed tree. Susceptible to scab. Does not keep well in ordinary storage. Blooms midseason. Z4-5. **ME Grown.**

0478 McIntosh, $16.00

Milden Fall-Winter. Alton, NH, about 1865. Old time all-purpose variety grown widely with great success where Baldwin lacked hardiness. Once fairly common in northern New England and still found in old western Maine orchards. Large oblate-to-conic fruit with a thin skin mottled and splashed with bright red. The fine-textured whitish flesh, tinged with yellow, is coarse, juicy, both sparkly crisp and melting. Take a bite and first it says "tart," but then it says "sweet." Very pleasing. Good for eating and cooking. Famous for winter pies. Ripens late and keeps till late winter. Last fall's crop was still firm, tasty and tart in early February. Large vigorous tree. Z3-4. **ME Grown.**

0491 Milden, $16.00



Newt Grindle Late Summer-Early Fall. Chance seedling. Blue Hill, ME, about 1936. Newt Grindle, while working as caretaker on the Byers Farm in Blue Hill, discovered a wild seedling and decided to cultivate it as a pig apple. Before long he realized that the fruit was too good for the pigs. The large picture-perfect aromatic fruit is oblate and noticeably ribbed, overspread with a translucent red-orange wash and stripes. Color reminds me of Northern Spy. Has a waxy coating which seems to deter insects naturally. The medium-coarse juicy greenish flesh has a mild taste with hints of cherry and cinnamon. Keeps remarkably well for an early apple. The tree has a naturally low and spreading habit and bears heavy annual crops. Z4-6. **ME Grown.**

0518 Newt Grindle, $16.00

Northern Spy Winter. Chance seedling. East Bloomfield, NY, about 1800. A bronze plaque marks the site of the original tree of this former commercial giant, which is still a renowned Maine favorite. Large delectable all-purpose fruit has yellow background covered all over with pink and light red stripes and wash. Very juicy and tender. Even though the thin skin bruises easily, it still keeps extremely well. Medium-to-large moderately vigorous slightly upcurving late-blooming long-lived tree. Its one drawback is being slow to come into bearing, although for us it has been worth the wait. Prefers fertile well-drained soil. There has been much speculation as to the origin of the odd name. Some maintain it was named after the legendary Northern Spy, a notorious hardcore abolitionist hero during the early 19th century who assisted slaves in escaping north, set up safe houses for them *en route*, and robbed and killed slave catchers. Our Northern Spy scionwood comes from an extremely old tree in Falmouth, ME. Z4-6. **ME Grown.**

0545 Northern Spy, $16.00

Opalescent Fall. Ohio, 1899. To my taste buds, most popular modern apples are sweet and crisp but lack any distinctive flavor. As I search for new varieties to offer I am always on the lookout for extremely flavorful dessert varieties. Opalescent fits that description. I can't believe I'd driven by the old tree a mile from home probably a thousand times before I finally stopped and tried it one day at the insistence of fellow local fruit explorer Brian Miller. This very large brilliant deep red dessert apple will shock your tongue with flavor. It's crisp, it's sweet, it's tart, it's juicy but most of all it's supremely flavorful. Every so often I meet someone who knows Opalescent and all agree. Wow! Excellent fresh eating. Said to cook up well too though I haven't tried them yet. Will keep to mid-late winter. Vigorous medium-sized annually producing tree. Z4-6. **ME Grown.**

0583 Opalescent, $16.00

Pound Sweet Fall. Manchester, CT, about 1834. Famous cooking apple once widely planted on Maine farms and still found here and there. There are two trees within a couple miles of home. Often claimed to be the best fall variety for baking, for apple sauce and even for stewing with quince. The sauce needs no sugar and gets sweeter as it cooks. Firm coarse flesh tinged with yellow. Sweet unusual flavor, called "peculiar" by Beach in *Apples of New York*. Not recommended for fresh eating. Very large roundish fruit, clear yellow marbled with green. Not a keeper. Large hardy long-lived open-spreading tree. Sometimes confused with another excellent apple, Pumpkin Sweet. Blooms midseason. Z4-6. **ME Grown.**

0610 Pound Sweet, $16.00

Red Baron Late Summer-Early Fall. MN 1500 (Golden Delicious x Daniels Red Duchess). U Minn, 1969. Large to very large blocky rounded slightly truncate rich deep yellow fruit, about half of which is covered with rosy-orange-red stripes and blush. "It looks very pretty on the tree," was how Aroostook grower Steve Miller put it to me. He and wife Barb are also big fans of Red Baron's flavor, hardiness and storability: "We really like these apples." The crisp glistening yellowish flesh is airy but juicy, pleasantly subacid, and has a nice sweetness. Good for fresh eating and culinary purposes, I'll bet it would also make a very good dried apple. Fast-growing productive and precocious tree bears young and annually. Scab resistant. Keeps until the first of the year. No dieback in northern Maine. Blooms midseason. Z3-4.

0653 Red Baron, $16.00

Red Gravenstein Late Summer. Uncertain Italian or German origin, 17th century or earlier. The most famous of all pie apples. There are numerous strains of Gravenstein. This deep solid purply-red strain can be found in old orchards in southern Maine. Mary Jones used this Red Gravenstein from Sweetzer's Orchard in Cumberland to win the Maine State Pie Championship a couple of years ago. She told me it's "sweet but very hard to describe…real nice…full-bodied…wonderful flavor." Ripens earlier than most other cooking apples, over the course of several weeks so you don't have to deal with them all at once. But they don't keep well. It's a minor miracle that Mary "somehow saved them until January for the State Championship." Large vigorous perfectly shaped tree. Easy to prune. Thanks to India Broyles and Bob Shafto for providing the scionwood from their ancient trees in Falmouth just up the road from Sweetzers. Triploid, will not pollinate other varieties. Not dependably hardy in Zone 4. Blooms early. Z5-8. **ME Grown.**

0672 Red Gravenstein, $16.00

Reinette Simirenko Winter. Ukraine, before 1895. May have originated on the farm of Platon Simirenko in the Ukraine although some say it's just a synonym for a fine old nineteenth century New Jersey apple called **Wood's Greening**. Became an instant favorite—in the all-time top five, according to one taster—the day we were introduced to Reinette at the Fedco Warehouse. Medium-sized round waxy dotted grass-green fruit, often with a brownish-orange or pink blush. Sort of a Granny Smith for the North. Greenish-yellow tender crisp fine-grained subacid flesh makes excellent eating. The *Classical Fruits* catalog calls it a "sweet, wine-like tangy flavor." Ripens where Grannys do not. Stores well. Not a vigorous tree. Blooms late. Z4-5. **ME Grown.**

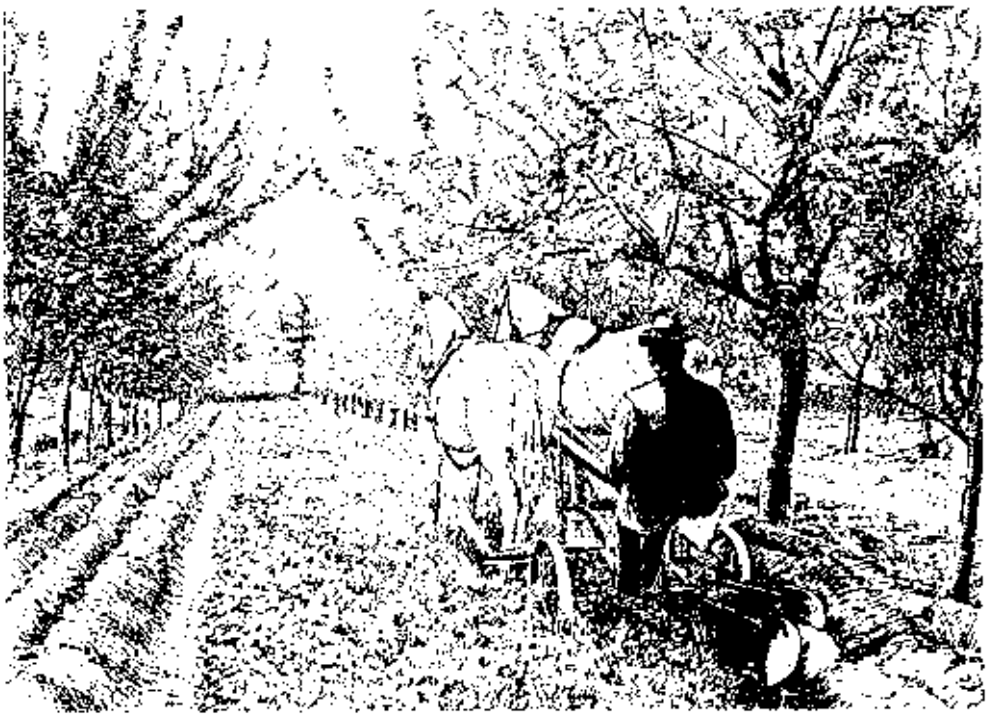
0700 Reinette Simirenko, $16.00

Roxbury Russet Winter. Roxbury, MA, early 1600s. Considered to be unsurpassed as a late winter dessert apple. Renowned for juice and cider. Together with Baldwin and Rhode Island Greening, one of the big three commercial apples in New England for most of the nineteenth century. Not as sweet as Golden Russet. Rich, spicy and juicy. Hard medium-large oblate-conic-angular fruit covered with greenish to yellowish-brown russet. Not uniform in size, shape or color. Keeps until June. Resistant to scab and mildew. In growing demand these days with the resurgence of interest in hard cider. Medium to large, vigorous spreading tree. Probably the first named American apple variety. Our scionwood comes, through the generosity of Dan Stearns, from one of the oldest trees in Maine growing behind *the* oldest house in Auburn. Z4-6. **ME Grown.**

0720 Roxbury Russet, $16.00

Smokehouse Fall-Winter. Seedling of Vandevere. Lampeter Township, PA, about 1800. All-purpose apple still quite popular in Pennsylvania and occasionally grown in central Maine. Most admired as a culinary variety, particularly for pies. Medium-large roundish-oblate mildly flavored delicately aromatic tart fruit. Downing calls it "rather rich subacid." I like its subtle flavor right off the tree. Substantial fruit quickly fills the cider press, pie pan or sauce pot. Although its name comes from having originated adjacent to William Gibbons' smokehouse, the fruit *looks* smoky, colored with a muted blend of yellows, greens and a reddish-brown blush. The long willowy branched tree bears large crops annually and is easily recognized in the orchard. Keeps well into late winter. Some scab resistance. Blooms midseason. Zones 4-6. **ME Grown.**

0743 Smokehouse, $16.00



Spencer Late Fall-Winter. Summerland S-5-4 (McIntosh x Golden Delicious) Canada Dept Ag Res Stn, British Columbia, 1959. This relatively unknown dessert apple has an avid following of commercial and home orchardists here in Maine and throughout the Northeast. We should have offered it years ago, but better late than never! The large oblong-conic yellow fruit blushed with light scarlet red is crisp, firm, juicy and very sweet. According to grower Phil Norris, it has "all the spriteliness of Golden Delicious combined with the incomparable sweet-tart ambrosia of a perfectly ripe Mac." It ripens after McIntosh and keeps relatively well. The tree is vigorous, upright-spreading, and bears annually, although it has a reputation of being somewhat slow to fruit. Blooms midseason. Z4-6. **ME Grown.**

0750 Spencer, $16.00

Sweet 16 Early Fall. MN 1630 (MN447 x Northern Spy). U Minn, 1979. Whenever anyone eats a Sweet 16 for the first time, you know they will be surprised. Fine-textured crisp flesh contains an astounding unusually complex combination of sweet nutty and spicy flavors with slight anise essence, sometimes described as cherry-like. Sam Shaw (my nephew, then age nine) declared, "It has a ton of different kinds of flavors." Ed Fackler (nationally esteemed pomologist, then about "our" age) described it as "expensive bourbon with a shot of vanilla." Either way, this is an amazing apple. Truly excellent fresh eating. Round-conic bronze-red medium-sized fruit, striped and washed with rose-red. Annual bearer if thinned. Very hardy moderate-sized vigorous vase-shaped tree grows upright with willowy branches that get loaded with fruit but do not break. Grower-friendly. Becoming more popular each year from Maine to Indiana. Some resistance to scab. Keeps till early winter. Blooms midseason. Z3-6. **ME Grown.**

0777 Sweet 16, $16.00

Thompson Summer. Unknown parentage, seed from Barre, MA. Mercer, Somerset County, ME, 1816. Great confusion and passion surrounds this apple that was introduced by John Thompson, one of Mercer's earliest settlers. Some claim the fruit is synonymous with the Massachusetts apple **Williams**. (They are quite similar.) Others claim it's synonymous with John Thompson's other introduction, Somerset of Maine. (Not!) After much research and detective work, I am pleased to say that two Thompson trees still stand in Mercer, one, quite old, on Bacon Road and another, more recently grafted, at Francis Fenton's Sandy River Orchard. Early season eating and cooking apple, ripens in August. Round-conic shape reminiscent of Red Delicious, solid red overspread with stripes of darker red. Glistening crystaline firm white flesh with a pink hue just below the skin. Sweet flavor with hints of plum and pear. Does not keep. Rare. Z4-6. **ME Grown.**

0790 Thompson, $16.00

Trailman Summer. Trail x Osman. Beaver Lodge Res Stn, Canada, 1973. A cross of Trail, a mediocre Canadian apple, and Osman, a sour crabapple of poor quality. But wait! In a recent email, Alaskan grower Clair Lammers wrote to me that Trailman is "by far the best eating crab that I grow….It produces heavily every year without any thinning." It's the "size and shape of a chicken's egg. With thinning to two apples per cluster, the size is in the 2-inch range." Clear shiny yellow fruit with a brownish-red blush and a straight pin of a stem. The golden yellow flesh is spicy sweet and crunchy. Very good fresh eating, cider and wine. Keeps about 6 weeks. Will ripen in Fairbanks. Exceptionally hardy precocious annually productive moderately vigorous upright spreading tree. We're very excited to be finally offering this crabapple. Many thanks to Bob Purvis of Minnesota for supplying us with the scionwood. In very short supply, order early! Z2-4. **ME Grown.**

0810 Trailman, $16.00

Wealthy Fall. Cherry crab seedling. Excelsior, MN, 1860. A Maine native of sorts, the seed having come from Bangor. Superb all-purpose fall apple, one of the most famous of all hardy varieties. With its perfect texture and complex flavors, Wealthy once again proved itself to be the undisputed champion for fall apple pies in the 2002 Belgrade Lakes Pie Taste-Off. Our old friend, long-time orchardist Francis Fenton, believes Wealthy—not McIntosh—deserves to be the favorite commercial apple of northern New England. The trees his father planted in Mercer 98 years ago are still going strong. Round-oblate medium-sized fruit is pale greenish-yellow streaked with carmine. About as firm as McIntosh. Tender very juicy sweet sub-acid flesh is white, often stained red. Good eating and even better cooking! Ripens over a long period. Productive moderately vigorous long-lived small to medium-sized tree. Blooms early. Z3-4. **ME Grown.**

0865 Wealthy, $16.00

Winthrop Greening Late Summer-Fall. Ichabod Howe Farm, Winthrop, ME, before 1800. Ichabod Howe (1731-1810) laid out many of Winthrop's roads, organized construction of its first church, was an accomplished trapper and hunter, served seven terms as selectman and was, appropriately enough, Winthrop's first orchardist. Although I know of many beautiful apples, this one is my favorite for beauty and up near the top for taste. One of the few Maine apples to receive attention from outside the state over the years. Three years ago I ate delicious specimens at the Tower Hill Botanic Garden in central Massachusetts. Quite popular throughout central Maine as late as 1920; now all but unknown. Large $3^1/4$" flattish-oblate beautiful fruit, light green with a red-orange wash, small greenish dots, and splashes and ribs of russeting, usually with a patch of russet radiating from the stem. Very interesting sweet flavor, medium-low acidity, with a crunch. We're pleased that this past spring a Winthrop Greening and another Winthrop apple, Moses Wood, from Fedco were planted at the new high school in Winthrop. Blooms late. Z4-6. **ME Grown.**

0905 Winthrop Greening, $16.00

Wolf River Fall. Alexander seedling. Near Wolf River, WI, 1875. Perhaps the most famous old time apple in Maine, likely due to its catchy name and its extremely large—even huge—round-oblate fruit. Pale yellow-green skin mostly covered with pink, deep red and bright crimson. Almost always has a vivid yellowish-greenish russety splash around the stem. Creamy-white coarse firm-but-tender flesh. Aromatic subacid flavor is very good for cooking. Makes an excellent baked apple and a decent pie. Particularly tasty dried. Not much good for fresh eating, but good things happen to the flavor when it's dried. I cut them in full slices right across the core and place them on a screen above the wood stove. They dry in a couple of days. Keeps until late fall. Large moderately vigorous productive spreading tree. Scab resistant. Blooms midseason. Zone 3-4.

0915 Wolf River, $16.00

Cider Apples

Cider was for hundreds of years the most popular drink in Britain and other parts of northern Europe. It was also the most popular drink in the eastern U.S. until well into the 19th century. It was almost always fermented. Over here, most cider orchards were composed of nameless seedling apples, although a few varieties such as Golden Russet, Roxbury Russet and Hewe's Crab were recognized as premier cider apples. In England however, there is a long tradition of cider varieties. These are NOT for fresh eating. In fact, most taste terrible. Nor are they suitable for sweet (unfermented) cider, although some might add character to a sweet cider blend. However, they all possess qualities that make them very desirable for fermented cider production, and fermented cider is what we mean by 'cider'.

In the early 20th century the National Fruit and Cider Institute in Long Ashton, England, was formed. Over the next few years, they evaluated about 2000 cider varieties, classifying them into four categories: **sharp** (low in tannins, high in acid), **sweet** (little or no tannin, low acid), **bittersharp** (high in tannins and high acid), and **bittersweet** (high tannins and sugar, low acid, astringent, said to make the highest quality cider). **Tannin** denotes naturally occurring compounds whose bitter astringency gives cider rounded full flavor, body, and golden color. The Cider Institute also applied the term **vintage** to those varieties that possess the perfect qualities for cider.

Many of these vintage apples have been imported to the U.S. in recent years and are being grown by cider enthusiasts. In response to this renaissance, we are offering a few of the best varieties this year. We hope to offer these and other vintage cider apples in the future. Our thanks to Steve Wood of Poverty Lane Orchards in Lebanon, NH, for his advice and for providing us with piles of scionwood for this project.

All the cider apples this year **are on M111 semi-dwarf rootstock**. M111 produces a large hardy well-rooted self-supporting early-fruiting tree about 80% of standard size. (2-5' two-year-old trees)

Bramtot Fall. Bittersweet. Thought to be a seedling of the old variety Martin Fessar. France, mid 19th c. Brought to England by the Woolhope Naturalists Field Club in 1884. Small ugly conic green partially russeted fruit with a dull orange blush. Firm cream-colored quite bitter very astringent flesh with a very high sugar content. Horrible fresh eating but an excellent bittersweet for blending in cider. Not very well known and rarely included in the literature. Steve Wood of Farnham Hill Ciders called it "a lovely little apple with nice juice." Strongly biennial. Z4-7. **ME Grown.**

0973 Bramtot, $17.00

Chisel Jersey Late Fall. Full bittersweet. Martock, Somerset, England, 19th c. Chisel Jersey is one of the most famous of the Somerset bittersweets. Round-conic red-striped fruit with a brownish-pink blush. Good sugar content and slow to medium fermentation. Medium acidity and high in tannins. Very astringent. Strong rich full-bodied colorful cider. Best blended with other apples. In old English 'chesil' means pebble. Chisel Jersey is small, hard and bitter! Spreading tree may require encouragement to develop a strong central leader. Consistent cropper. Late Bloomer. Z4-7. **ME Grown.**

0978 Chisel Jersey, $17.00

Dabinett Late Fall. Medium bittersweet. Probably a seedling of Chisel Jersey, Middle Lambrook, Somerset, England. Most popular cider variety in Somerset today. Medium-sized light yellow fruit with a medium-dark red blush and very dark red stripes. Sugar content fair and fermentation moderate. High quality and well-balanced low-acid cider, mildly tannic but very crisp. Excellent blended or as a vintage single-variety cider. Louise Wood described the taste of biting into one as "like sucking on old pennies." Crops regularly. One source says it performs well on dwarf rootstocks. Another says it requires a vigorous rootstock to do well. Ours is on M111. Grower-friendly tree with a spreading drooping habit, may require help in developing a strong central leader. Midseason bloomer. Z4-7. **ME Grown.**

0982 Dabinett, $17.00

Foxwhelp Fall. Bittersharp. Gloucestershire, England, 17th c. Supposedly discovered next to a fox den about 400 years years ago in Gloucestershire or Herefordshire. Won its popularity way back then for its distinctive musky flavor and strong aroma. Still produces a vintage golden cider. Has enough tannin to be suitable alone or blended. Medium-large brilliant red fruit. Considered moderately vigorous and a good cropper. One of the most famous of the old cider varieties. High specific gravity. Moderately vigorous productive tree. Blooms early. Z4-7. **ME Grown.**

0986 Foxwhelp, $17.00

Somerset Redstreak Early Fall. Medium bittersweet. Old variety from southeast Somerset, England. Frequently planted in newer British cider orchards. Medium-sized conic fruit, striped and blushed shiny red. Considered a heavy cropper. Makes a pleasant single-variety cider with soft tannin. Often blended with sharper varieties for the best ciders. Tree has an upright growth habit but may require heading back the central leader in early years to develop strong lateral branches. Midseason bloomer. Z4-7. **ME Grown.**

1020 Somerset Redstreak, $17.00

Yarlington Mill Fall. Medium bittersweet. Yarlington, near North Cadbury, Somerset, England, 1898. Once common in farm orchards of central Somerset. Large yellow conical fruit with a pinkish blush and distinct lobes at the blossom end. Considered an all-round excellent variety, reliable, productive and adaptable to varying conditions. Rich brown low-acid juice. Above average sugar content. Slow to medium fermentation. Pleasant aromatic cider. Somewhat gangly tree, you may need to head back the leader in early years to encourage strong laterals. Midseason bloomer. Z4-8. **ME Grown.**

1029 Yarlington Mill, $17.00

Scionwood

This year we are offering scionwood from a wide selection of fruit trees including many of the items in this catalog. Write for a list. The price is $3.00 per stick (about 8") plus shipping. Deadline for ordering scionwood is February 27, 2004.

Hardy Rootstocks

We consider these to be some of the best rootstocks for home or commercial use. Any of these produce fruit suitable for wildlife without grafting. For rootstocks not listed, or for larger calipers or larger quantities, please write for information. We also offer grafting supplies in the Organic Growers Supply section of the seed catalog.

If you desire early shipment of rootstock, please place a separate order. Early shipment of rootstock is around March 30. We can also ship rootstock with the rest of your Fedco Trees order in April.

Please join us Sunday, March 28, 2004, at the Maine Tree Crop Alliance annual scionwood exchange and grafting workshop in the exhibition hall of the MOFGA permanent site in Unity.

***Malus* 'Antanovka'** (Apple) Hardy Russian seedling rootstock for standard-sized apple trees. Z3. (1/4" caliper)

1040 Malus antanovka, bundle of 10, $16.00

EMLA 26 (Apple) Produces a tree about half the size of a standard tree, in between the size of M9 and M7. Appears to be hardier than M7, producing better quality fruit. Adaptable to all but badly drained soils, not as sensitive to mineral deficiencies as some other rootstocks. Staking recommended in exposed locations. Z5, maybe 4. (1/4" caliper)

1042 EMLA 26, bundle of 10, $16.00

Prunus americana (Plum) Seedling rootstock for American, Japanese or hybrid plums. See item #**2707**.

***Prunus cerasifera* 'Myrobalan'** (Plum) Seedling rootstock for European type plums. Not recommended for American or hybrid plums. Z4. (1/4" caliper)

1052 Prunus cerasifera, bundle of 10, $16.00

Pyrus communis (Pear) Seedling rootstock for pears. Exceptional resistance to pear decline. Good uniformity. Z4. (1/4" caliper)

1056 Pyrus communis, bundle of 10, $16.00

Pears

Pyrus communis are native to temperate Europe and Asia and can grow up to 100' tall in the wild. Many pear varieties are hardy in New England, but tend to take longer to come into bearing than apples. Further south, pears tend to bear annually. However in Maine, where they are approaching their northern limit and due perhaps to our harsher climate, pears tend to bear biennially. Pick fruit when green and ripen it on the shelf. Or, for optimal eating, try Ed Fackler's method: "...when fruits exhibit slight color changes, begin to test pressure (using your thumb) near the stem. When there is a slight "give," pick all the fruit, store at or near 35˚ for 7 or more days. Then remove them as needed, allow them to sit at room temps for 2-4 days which allows them to ripen to peak flavor."

Many thanks to Earland Goodhue for his ongoing support. Once again this year Earland generously provided us with much scionwood from his amazing pear and apple orchard in Sidney, ME.

Pear blossoms are less attractive to bees than apple blossoms, so pears should be planted closer together to ensure pollination. Although some pears appear to be self-pollinating, **we recommend a second variety for pollination**. Bloom dates for all varieties are similar. Plant pear trees 15-20' apart. (3½-6' trees)

Bosc Fall. Seedling in Lourain, Belgium, 1807. Also called **Beurre Bosc**. Large and long-necked; dark rich yellow covered with cinnamon-brown russet. Distinctive sweet rich spicy buttery flavor. Melting juicy tender white flesh has smooth texture and a pleasing aroma. Somewhat gritty around the core. Good pollinator. Large vigorous upright spreading tree bears huge crops annually. A longtime favorite throughout central Maine. Z4. **ME Grown.**

1120 Bosc, $16.00

Clapp Favorite Mid-Late Summer. Said to be Bartlett x Flemish Beauty. Dorchester, MA, before 1860. Very hardy pear common in Maine for over 100 years. Medium-large fruit is pale lemon yellow, mottled bright red. Round-bodied with a short neck. Medium-firm fine-textured with granular center, very juicy melting sweet fruit with that absolutely perfect "pear flavor" for fresh eating. Pick before perfectly ripe and finish indoors (tendency to soften at the center after ripening). Our scionwood comes from an ancient tree on Earland and Helen Goodhue's farm in Sidney. Z4.

1130 Clapp Favorite, $16.00

Comptesse Clara Frijs Summer. Germany, 19th c. High-quality dessert pear, fairly common in the Canadian Maritimes but quite rare in the States. As with apples, many of the best pears are virtually unknown; this is one of them. Grower Mark Fulford says, "The flavor is what gets me." It's the "most like nectar" of any of the 40 varieties he's grown. Buttery perfumy medium-sized smooth-skinned yellow to slightly green pyriform fruit sometimes has a sunnyside blush. Keeps for a month. Solid rugged hardy tree. Z4. **ME Grown.**

1135 Comptesse Clara Frijs, $16.00

Dana Hovey Winter. Thought to be a seedling of Seckel. Roxbury, MA, about 1854. Introduced by the avid nineteenth-century fruit enthusiast Francis Dana who dubbed it *Dana's Hovey* in honor of CM Hovey, Boston nurseryman and author of *The Fruits of America*. Sometimes called **Winter Seckel** because of its similarity to Seckel. Small intensely sweet highly aromatic tender storage pear. Excellent flavor; possibly the best eating of all winter pears. Keeps extremely well. Harvest in October and store in a cool dry spot. Still great eating in December—sometimes even as late as February. Rich golden-yellow russeted fruit. Hardy vigorous moderately productive spreading tree adapts to a variety of soils. No scab and relatively few bugs. Z4. **ME Grown.**

1140 Dana Hovey, $16.00

Early Bartlett Summer. Unknown origin. Len Alexander, longtime fruit explorer and orchardist from Chelsea, has been entertaining me with stories and introducing me to interesting and unusual varieties for years. Again this year we are offering several of his pears. He gave me this very old early strain of Bartlett. With its large yellow classic pyriform excellent-quality fruit, Early Bartlett is similar to the regular Bartlett in every way except that its season is much earlier. Ripens in September in central Maine. Z4. **ME Grown.**

1141 Early Bartlett, $16.00

Luscious Early Fall. SD E31 x Ewart. SD State U, 1967. One of the few recent pear introductions that deserves a place in the home orchard. Produces annual crops of absolutely delicious medium-sized fruit. Bears so heavily that it's apt to break branches. The soft fine extra-juicy off-white flesh is sweet and flavorful with almost no grit cells. Thin yellowish skin is covered with small tan dots. Appears to be self-pollinating and seems to defy the dreaded pest plum curculio despite a lack of spray. Although some literature warns it will not pollinate other pears, I wouldn't exclude it from my orchard. Z3.

1175 Luscious, $16.00

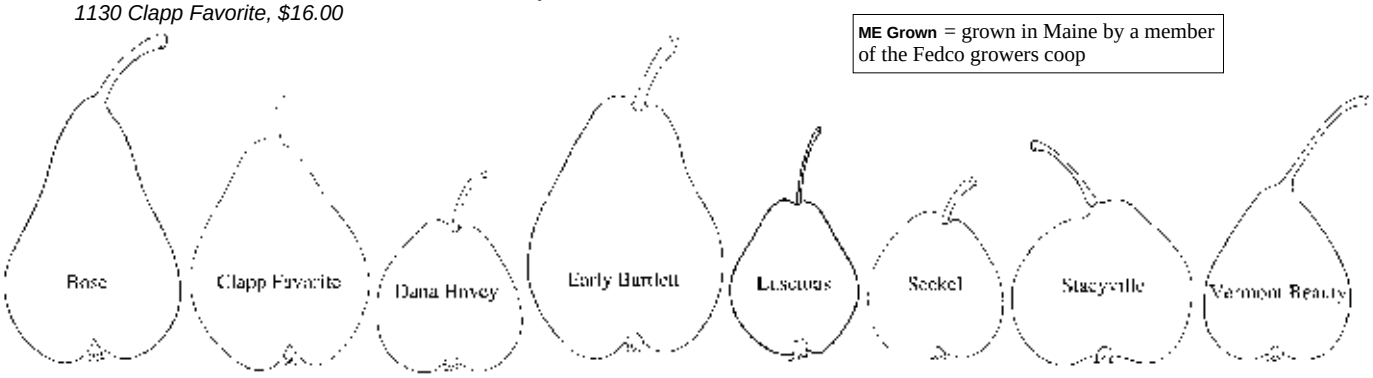
Seckel Late Summer. Seedling near Philadelphia, PA, early 1800s. Sometimes called **Sugar Pear**. Usually considered the best-flavored of all pears; even the skin is delicious. Small fruit is yellowish-brown russeted with slight red blush. Juicy, spicy, distinctive and aromatic. Eat ripe off the tree or pick firm and ripen later. Very productive annual-bearing large tree, easy to grow. *The* most reliably bearing fruit tree I have. Scab and fireblight resistant. Will not pollinate Bartlett. Z4. **ME Grown.**

1230 Seckel, $16.00

Stacyville Late Summer. Unknown origin. When I first saw this pear in an old orchard in Stacyville, ME, I thought that the 50' tall vase-shaped tree was an elm. It was spectacular, dwarfing the surrounding apple trees. That tree, now held together with cables, is extremely old but still bears huge crops. My twelve-year-old Stacyville is also loaded with fruit. Medium-sized pears have a roundish teardrop-shape and are light yellow with a beautiful orange to greyish-red blush. Sweet fruit has a delicious citrusy aftertaste. Self-pollinating, annual bearing, disease resistant, extremely hardy and very vigorous. Even seems to fend off plum curculio without any spray. Rare. Z3. **ME Grown.**

1240 Stacyville, $16.00

ME Grown = grown in Maine by a member of the Fedco growers coop



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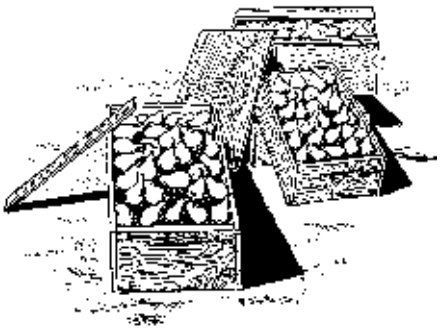


Summercrisp Mid-summer. MN N33201 (Gaspard No. 5) Unknown parentage. U Minn, 1986. Brought to the Horticultural Research Station by a John Gaspard in 1933. Large pyriform very sweet dessert and canning pear with green skin and a red blush ripens in August in Maine. A favorite of Donna and Chyp of Loon Song Farm in Hartland who bought one from us nearly 20 years ago and have been Summercrisp fans ever since. One reason Donna likes it is it comes on when you're looking for fruit, early in the season. "They're best crisp before they get supermarket soft." In fact, once they do soften, they go by fast. They eat them fresh, can them in quarters and juice the rest. The juice is so sweet, Donna told me she has to cut it with apple juice when she's canning it or it will get fizzy and explode. Precocious, annually bearing tree, medium-sized and typically conic. Long considered the hardiest variety in the Minnesota collection. Free from fireblight. Z3.

1250 Summercrisp, $16.00

Tyson Summer. Jenkintown, PA, about 1794. Widely planted in Maine for generations. After years of looking for a good source of grafting wood for this pear, we finally located a huge ancient tree in nearby Freedom. Well over 100 years old, the tree has lived through all the great winters of the 20th century. The definitive 1921 text, *The Pears of New York*, calls Tyson's flavor "second only to Seckel," and says that the "tree is the most nearly perfect of any pear grown in America." Went out of favor because it was not as large or pretty as Bartlett. Medium-sized roundish pyriform deep dull-yellow fruit with some russeting and no blush is very juicy, sweet and aromatic. Very large vigorous annually productive upright spreading tree. Tolerant of bugs, disease and weather. Fire-blight resistant. Rare. Z4. **ME Grown.**

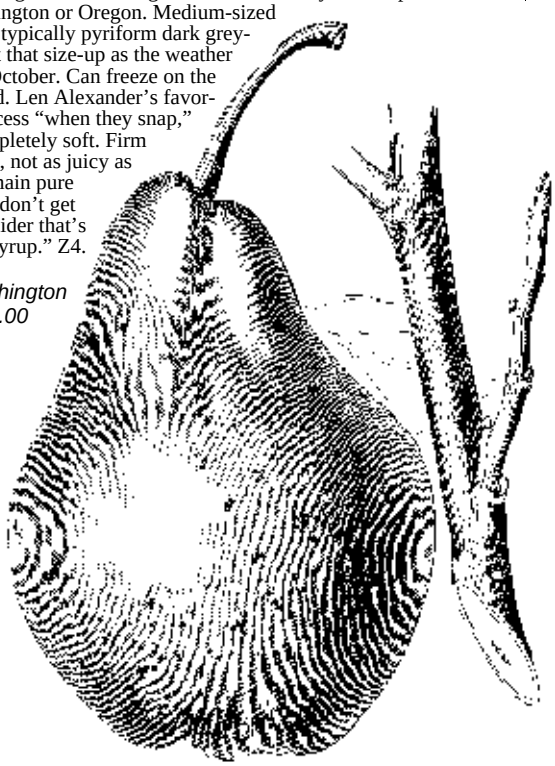
1270 Tyson, $16.00

Vermont Beauty Fall. Chance seedling. Grand Isle, VT, about 1860. How surprised I was to discover, amidst the slime in a crate of rotting pears I'd neglected for weeks, the Vermont Beauties just as perfect as the day I picked them and still absolutely delicious. Medium-sized slightly pyriform fruit, lemon yellow with a bright red blush that fades into pinkish-red dots. Tender melting fine-grained juicy yellow-tinged flesh. An excellent dessert pear. Medium-sized healthy productive vigorous upright spreading tree. Keeps for several weeks! Another excellent pear we are pleased to reintroduce. Rare. Z4. **ME Grown.**

1287 Vermont Beauty, $16.00

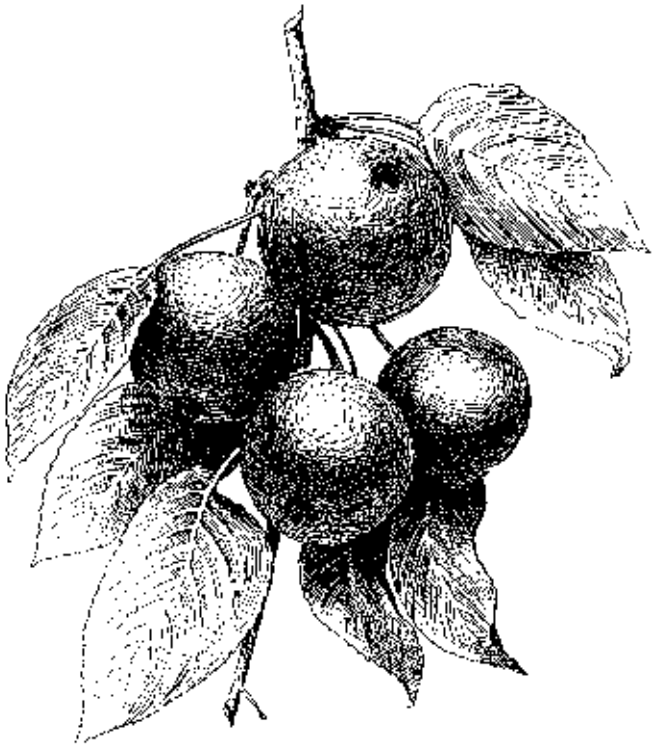
Washington State Late Fall. Unknown parentage, uncertain origin. Discovered many years ago on a Washington State University field trip in the mountains of Washington or Oregon. Medium-sized tree with very large typically pyriform dark grey-brown russeted fruit that size-up as the weather cools and ripen in October. Can freeze on the tree and still be used. Len Alexander's favorite for canning. Process "when they snap," before they are completely soft. Firm slightly grainy flesh, not as juicy as his other pears. Remain pure white in the jar and don't get soft. Makes a pear cider that's "just like drinking syrup." Z4. **ME Grown.**

1290 Washington State, $16.00



Asian Pears

Pyrus pyrifolia have been grown in China, where there are thousands of named cultivars, for over 2000 years. Very long-lived and bearing young, they often produce extremely heavily at maturity. Asian pears differ from European pears in texture, taste and appearance: they are crisp and very juicy, sweet and mild with a nutty background, and are roundish in shape. Although partly self-fruitful, pollinators are recommended. The four varieties we offer will pollinate one another. Some European pears, notably Bartlett, will also act as pollinators as long as bloom times overlap. Because they set so heavily, to ensure large fruit size, thin the crop once or even twice during the first two months after bloom. Unlike European pears, they should be tree-ripened. When the seeds are black, the pears are ready to pick. They ripen in late summer and keep several weeks under refrigeration. Cultural requirements are similar to European pears. Although there have been occasional reports of Asian Pears growing in Zone 4, they should be considered a Zone 5 plant. ($3^1/_2$-6' trees)



Hosui Late summer. Ri-14 (Kikusui x Yakumo) x Yakumo. National Hort Res Stn, Tsukuba, Japan, 1972. Standard commercial variety. Large round-oblate long-stemmed fruit with medium-thick skin covered with glowing yellow-orange-golden brown russet and numerous light russet dots. Firm crisp fine-textured juicy mild subacid yet sweet rich-flavored white to off-white flesh is considered by some the best flavored of all Asian Pears. Will store for a month. *Hosui* means Much Water. Medium-sized very vigorous spreading productive tree has a floppy loose almost weeping growth habit. Z5. **ME Grown.**

1330 Hosui, $16.00

Seuri Late summer. Very large round or slightly elongated yellow fruit is mottled green-brown and partially russeted. Fine textured sweet crisp juicy aromatic and flavorful flesh keeps about a month. Heavy bearer. Thin to one fruit per cluster to maximize size. Vigorous tree with an upright habit and very large (up to 6") yellow-green foliage. Handles wet soils better than many fruits. Fire blight resistant. Z5. **ME Grown.**

1350 Seuri, $16.00

Shinsui Summer. Earliest good commerical variety. Medium-sized round-oblate yellowish brown russetted fruit. Crisp juicy fine-textured very sweet flesh. Not as firm as other Asians. Excellent fresh eating. Even if you don't thin the fruit, it's still sweet. Pennsylvania grower Ike Kirschner considers this a great pear. *Shinsui* means New Water. Susceptible to black spot (*Alternaria*). Z5. **ME Grown.**

1377 Shinsui, $16.00

Tsu Li Late summer. Ancient Chinese variety originating in the Shantung Province in northern China and grown there for thousands of years. Also spelled **Tse Li**. Very large—up to two pound—oddly oval to pear-shaped light green to yellow fruit speckled with small brown dots. Firm coarse texture, mildly sweet, aromatic, tender and juicy. Keeps until New Year's or later. Large upright vigorous productive tree. Requires early blooming pollinator such as Seuri or Ya Li. Z5. **ME Grown.**

1380 Tsu Li, $16.00

Stone Fruits

Prunus spp. are widely cultivated around the world and adaptable to most of New England. Not highly particular as to soils. **Clingstone** means the fruit's flesh clings to the pit (or stone) and a **freestone** pit drops away from the flesh.

Apricots

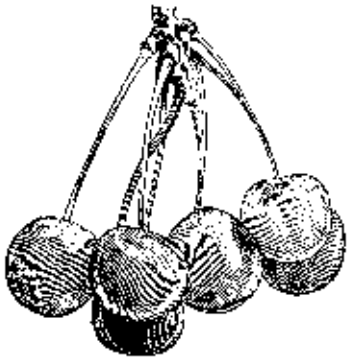
P. armeniaca For many years we have not been entirely happy with the commercially available apricot varieties and so, with the assistance of growers from around the country, we have begun a trial program here in Maine. We have a modest number of apricots for sale this year. Write to us for details or special orders, or come to the sale in May.

Sweet Cherries

P. avium are generally not hardy in Maine. Most grow into very large trees. We are currently testing some of the hardiest varieties and hope to have more of them available in upcoming years.

Stella Mid-summer. 2C-27-19 (Lambert x John Innes Sdlg. 2420.) Canadian Dept of Ag Research Stn, Summerland, British Columbia, 1968. The first hardy good-quality self-fertile sweet cherry. Large heart-shaped black-skinned fruit has juicy medium-firm black flesh. May be a disappointment to sweet cherry aficionados from the Northwest but could be like a dream come true for orchardists living in more tropical locales of Maine. Fruit buds are relatively tender. Upright spreading vigorous productive tree will grow to 25-30'. Self-pollinating. Z5. ($3^1/_2$-6' trees)

1550 Stella, $16.00



Pie Cherries

P. cerasus are called "sour," but they're delicious enough to eat right off the tree. Often producing crops in 3rd or 4th year, they're easier to grow than sweet cherries, and significantly hardier. They fruit in early to midsummer and don't mind heavy soil. They are generally divided into two groups: Morello types have dark red spherical fruit, dark juice and relatively small compact trees. Montmorency (or Amarelle) types have light red slightly flattened fruit, clear juice and medium-sized somewhat open trees. **Pie cherries do not require another variety for pollination**. Plant 15-20' apart. ($3^1/_2$-6' trees)

Evans Mid-Late Summer. Unknown parentage. Edmonton, Alberta, Canada. Rescued from obscurity in 1976 by Dr. Ieuan Evans for whom it was named. Thought to have been brought to Alberta by early settlers from Minnesota. Known in the Edmonton area at least back to 1923 but only recently gaining widespread attention through the efforts of Dr. Evans and, more recently, Bill MacKentley of St. Lawrence Nurseries who renamed it **Bali**. Currently the best-selling fruit tree on the Canadian prairie. Incredibly hardy, possibly even to Zone 2. Large—even huge—crops of English Morello-type fruit virtually every year. Excellent eating, jams, jellies, pies, dark red juice and wine. Tolerant of a wide range of soils, although light fertile soils are preferred. Naturally dwarf tree. Z3. **ME Grown.**

1567 Evans, $18.00

Meteor Summer. MN 66 (Montmorency x Vladimir). U Minn, 1952. Considered superior to Montmorency. Very good eating right off the tree. Once again this year, I feel like a cedar waxwing, scampering up the Meteor tree and engaging in a feeding frenzy. I recommend you try it. Also excellent for pies, canning and freezing. Easy to pit. Excellent dried. Bright scarlet-red roundish-oval fruit. Clear bright yellow flesh and clear juice. Mildly acid flavor. Ripens after Northstar: mid-July in Central Maine. Reaches 12-16'. Z3. **ME Grown.**

1575 Meteor, $16.00

Montmorency Summer. Seedling of Cerise Hative or Cerise Commune. Montmorency Valley, France, before 1600. Introduced to the U.S. about 1830. The most famous of all pie cherries. Not widely grown in Europe or Russia but long the standard of excellence in the U.S. Firm-fleshed bright red fruit makes a clear light pink juice. Although generally considered not as hardy as our other offerings, friends are growing and fruiting it quite successfully in northern Aroostook County, so it is hardy. Vigorous productive medium-sized upright-spreading tree tolerates a variety of soils. Parent of the fine variety Meteor. Z3/4. **ME Grown.**

1580 Montmorency, $16.00

Northstar Summer. MN 58 (English Morello x Serbian Pie #1). U Minn, 1950. Morello-type cherry can be eaten fresh when ripe. Large roundish heart-shaped fruit with a small stone. Dark glistening mahogany-red skin. Dark red meaty tender juicy flesh has pleasantly acid flavor. Very productive. A natural dwarf reaching 9-10'. Resistant to brown rot and cracking. Z3. **ME Grown.**

1590 Northstar, $16.00

Peaches

P. persica Although many people will tell you not to bother growing peaches in Maine, if you've been repeatedly saddened by the poor quality available in the supermarket, what's there to lose? Jamie Greager, our lilac grower, has been growing excellent Red Havens a few miles from my farm for years—in Zone 4. Many other trees in northern New England are also producing large crops. While these are certainly not like what you'd get if you went to Georgia, they still taste awfully good. They bear young and so heavily that they may break branches if unthinned or unsupported. Peaches are usually unaffected by pests or diseases in northern areas. The trees may also die unexpectedly at any age. There are no truly hardy peach cultivars, although Reliance is considered the hardiest. **Peach trees do not need a second variety for pollination**. Plant 15-20' apart. ($3^1/_2$-6' trees)

Belle of Georgia Summer. Seedling of Chinese Cling. Marshallville, GA, about 1870. Old-time favorite and surprisingly hardy in spite of its origin. Large beautiful roundish-oval cream-colored fruit with a bright red blush has thin tender skin. Flesh is white, tinged with red, firm, melting, juicy, very high quality. Freestone. Very good fresh eating, cooking and canning. Large vigorous productive tree. Resistant to bacterial spot. Slight resistance to brown spot. Hardier than we originally thought; we now know of trees fruiting well almost as far north as Bangor. Z4/5.

1603 Belle of Georgia, $16.00

Red Haven Summer. Halehaven x Kalhaven. MI Ag Exp Station, 1940. Considered hardy, but not as hardy as Reliance. Medium-sized round fruit with beautiful red and golden-yellow skin and sweet firm fine-textured yellow flesh. Non-browning. Excellent for eating, freezing, canning, shipping. Probably the best-flavored peach we offer; also the world's most widely planted freestone peach. Hardy buds; vigorous highly productive disease-resistant spreading trees are tolerant to bacterial spot. Z4/5.

1645 Red Haven, $16.00

Reliance Summer. Open-pollinated seedling of Minn PHO 4559 x Meredith. NH Ag Exp Station, 1964. Considered the hardiest peach. Medium-sized, roundish, freestone. Rather dull red blush over greenish yellow. Bright yellow flesh, soft and juicy. Flavor usually considered fair, but those who grow it in Maine love it. Often produces large crops. Bears at an early age. Z4/5.

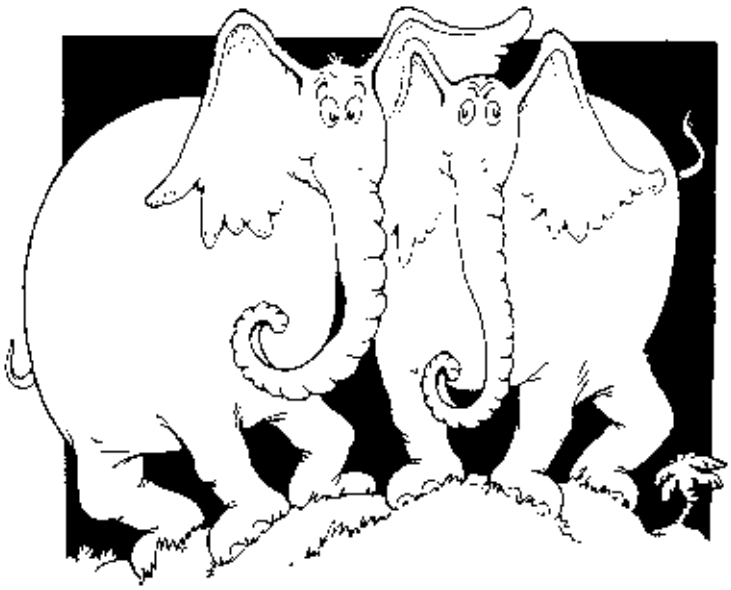
1650 Reliance, $16.00

Hardired Nectarine Summer. Lexington x NJN 32. Harrow Station, Ontario, 1974. Nectarines are peaches with smooth skins. Mottled red-orange 2" fruit with a deep purple blush, looks almost like a plum. Medium-thin tasty skin. Aromatic school bus-yellow flesh. Juicy melting texture with absolutely delicious flavor, somewhat tart and reminiscent of mangoes. Steve Bellavia of nearby Albion wrote, "They are very sweet and seem just as good as the nectarines we used to raise in our backyard in California." I don't recall eating nectarines in California, but I have eaten Hardired and I agree: they are excellent. Freestone. Self-pollinating. Resistant to brown rot and bacterial spot. Z4/5.

1670 Hardired Nectarine, $16.00

Hybrid Plums *Prunus* spp., are extremely hardy crosses between various Asian plums and American species. I'm pleased to learn that Wisconsin horticulturalist Brian Smith is currently involved in a hybrid-plum breeding program in River Falls. We hope to be offering some of his selections in upcoming years. For too long this magnificent fruit has been almost completely neglected.

All these require a second variety for pollination planted close enough so that their branches actually interweave as the trees mature, about 4-10' apart. While Toka, South Dakota and Kaga are often recommended as the best pollinators, I would suggest any pair as a good match. Three or more different varieties is even better. Bloom times similar for all varieties we list. Not susceptible to black knot. (3½-6' trees)



Elephant Heart Late summer. Japanese type (*P. salicina*) of unknown parentage. Selected by Luther Burbank in about 1920. Introduced by Stark Brothers Nursery, Louisiana, MO, 1929. Very large slightly heart-shaped high-quality dessert fruit. Thin tart skin is marbled and blotched with purple and green. Purplish-red flesh is soft, juicy and very sweet—absolutely delicious. For pollination, we recommend planting near other Japanese types or any of the hybrids. The more varieties nearby, the better the chance of getting a decent crop. Broad spreading tree. Not as hardy as the hybrids, iffy in Zone 4. **ME Grown.**

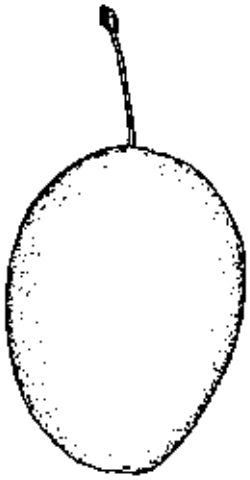
1683 Elephant Heart, $16.00

Gracious Late Summer. Mandan 41-15 [(open-pollinated seedling of Emerald (*P. sal.* Burbank x *P. americana* Brittlewood) probably x Red Wing (*P. sal.* Burbank x *P. a. mollis* Wolf)]. Northern Great Plains Field Station, Mandan, ND, 1957. Oval-to-roundish yellow-orange fruit with coral-red mottling. Yellow-orange firm juicy sweet flesh. Freestone. Although there are still many plums I've yet to taste, this one rates with Purple Heart as one of my two favorites. A supremely excellent fresh-eating plum. Even with a heavy crop, it's hard to have any left over for its excellent sauce or jam. Upright spreading tree. Rare. Z3. **ME Grown.**

1685 Gracious, $16.00

Kahinta Mid-Late Summer. Luther Burbank's *P. sal.* Apple x *P. a.* Terry. SD, 1912. Introduced by the great plant breeder NE Hansen using the same parentage as another excellent plum, Waneta(**#1755**), and similar to it. Large 1½" roundish slightly pointed fruit, flattened at the stem end. Tart brilliant red-purple skin and tart but quite flavorful translucent yellow-orange flesh. Easy to peel; peeled fruit looks like a peeled tangerine. Or you can bite a small hole in the skin and suck out the juicy flesh. Clingstone. Very good for fresh eating or canning. Medium-sized spreading tree. Kept pruned, my 20-year-old tree remains about 8 feet tall. Bears more reliably than most other varieties in my orchard. *Kahinta* is the Sioux word for "sweep." Rare. Z3. **ME Grown.**

1695 Kahinta, $16.00



Monitor Late Summer. MN 70 (*P. s.* Burbank x *P. a.*) U Minn, 1920. Medium-sized roundish ovate tart thick-skinned deep purple pointed fruit with a thin bloom. Thick meaty orange flesh. Frank Foltz of Northwind Nursery described it to me as having a "strong, spice flavor on the tart side…too tart, perhaps, for most peoples' taste, but I like the sprightly flavor." Clingstone. Vigorous productive upright spreading tree. Z3. **ME Grown.**

1704 Monitor, $16.00

Pembina Late Summer. *P. s.* Red June x *P. nigra* (Manitoba wild plum). Intro by NE Hansen, SD Exp Stn, 1923. Large pointy bright red fruit with bluish bloom. Sweet, firm but juicy, yellow flesh. Outstanding fresh eating. Bob Purvis, former North American Fruit Explorers president and longtime unofficial Fedco consultant, originally recommended it to me. I think this plum was one of the first varieties he said we *had* to offer. Bob was living in Alaska at that time and wrote that Pembina had withstood -43˚. Caught my interest. Probably hardy enough wherever you are. Z2/3. **ME Grown.**

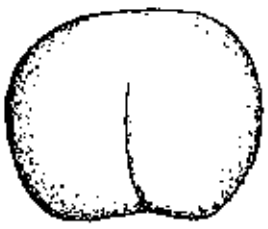
1715 Pembina, $16.00

Superior Late Summer. MN 194 [*P. sal.* 'Burbank' x 'Kaga' (*P. a.* x *P. simonii*)]. U Minn, 1933. Large conical dark red plum with a heavy bloom. Firm yellow flesh is smooth textured, juicy, clingstone. Frank Foltz, plum tester and owner of Northwind Nursery in Princeton, MN, wrote to me, "This is the closest thing to a peach that can be grown in our harsh climate. Very large, sweet, extremely juicy and of the best quality for fresh eating." Z3. **ME Grown.**

1735 Superior, $16.00

Tecumseh Midsummer. Shiro x *P. hortulana* Surprise. SD Stn, 1923. Not well known, and rarely sold anywhere, but considered by some enthusiasts to be one of NE Hansen's best introductions. David Bedford of the Minnesota Horticultural Research Station mentioned it to me as one he particularly liked. Excellent fresh eating. Round-ovate bright red fruit with a bluish bloom. Firm juicy subacid yellow flesh. Reliable and productive tree has unusual greyish-brown bark. Named in honor of Shawnee Chief Tecumseh who refused to sign the Treaty of Greenville in 1795 which would have given up his tribe's lands. Z3. **ME Grown.**

1740 Tecumseh, $16.00

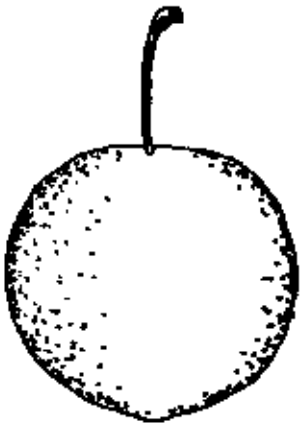


Toka Late Summer. *P. a.* x *P. sim.* (Chinese apricot plum). Intro by NE Hansen, SD Exp Stn, 1911. Rosy red fruit, up to an 1½" in dimenter, mottled with darker purply red and covered with a faint bloom. Grower Don Johnson's comment at last year's Common Ground Fair was, "Talk about flavor: candy plum." Grower Ed Fackler called Toka the best-flavored plum he grows in his Indiana orchard. Sweet, distinctive, meaty and flavorful. Not real juicy. Extremely vigorous tree blooms heavily every year. Diligent pruning may be required to keep it from becoming a bit of a monster. Excellent pollinator for other hybrid plums. Z3. **ME Grown.**

1745 Toka, $16.00

Underwood Midsummer. MN 91 (Shiro x *P. a.* Wyant). U Minn, 1920. Medium to large 2" fruit. Yellow skin with dull red overcoat. Firm sweet juicy golden-yellow freestone flesh, good for eating and cooking. Northern Maine grower Steve Miller considers it to be one of his most reliable bearers. Long picking season. Vigorous large spreading tree blooms early. Z3. **ME Grown.**

1750 Underwood, $16.00



Waneta Midsummer. *P. sal.* Apple x *P. a.* Terry. NE Hansen intro, SD Exp Sta, 1913. Released one year after Kahinta, and with the same parentage, when hybrid plums were an important and commercially viable crop. Named after a Yanktonai youth who won fame in the War of 1812 and later became a great chief. Large 1½-2" reddish-maroon fruit, slightly less pointed than Kahinta (#**1695**). Sweet tender translucent orange flesh is very juicy but not dripping. Medium-thick skin, tart and easy to peel. Delicious overall taste. Hansen said of Waneta: "My belief is that in this variety I have combined the best points of the native and the Japanese plum. It is probably the largest [fruit] of over 10,000 seedlings." Early-blooming healthy open spreading tree bears reliably in our orchard. Z3. **ME Grown.**

1755 Waneta, $16.00

European plums

P. domestica Although also delicious fresh, this is the plum that is grown commercially for prunes. A true prune is a plum that can be dried without the pit fermenting. European plums produce smaller fruit and are generally not as hardy as the hybrid plums, though they can handle heavier soils and are less prone to brown rot. Unlike hybrids, they are prone to the fungal disease black knot, which looks like black chewing gum and appears on branches. While not necessarily fatal, it must be kept in check by removing and destroying infected branches. Trees grow upright and are usually trained to a central leader. Although **European plums are self-pollinating**, planting two different varieties will improve pollination.
(3½-6' trees)

Mount Royal Late Summer. Chance seedling, Outremont, Québec, before 1903. Popular plum in Québec and the northern U.S. for many years, also called **Mont-Royal**. Bears abundant annual crops of medium-sized roundish dark purple fruit, often considered the sweetest of the European plums. The flesh is greenish-yellow, juicy and firm. Use fresh, dried, frozen, canned and in preserves. Medium-sized tree is open, requires only moderate pruning. Z4. **ME Grown.**

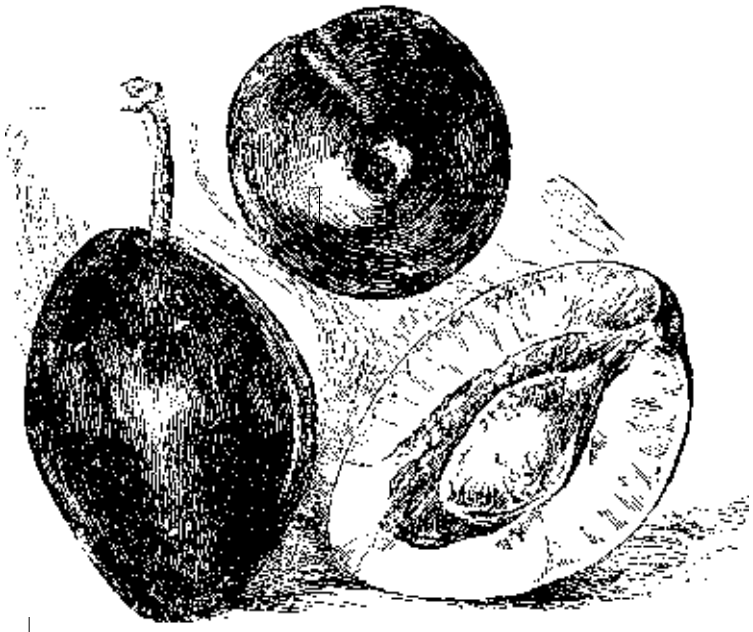
1780 Mount Royal, $16.00

Oullins Mid-Late Summer. Green Gage type. Germany, mid-nineteenth century or earlier. Also called **Oullin's Green Gage**, **Ouillin's Golden Gage** or **Ouillins Gage.** Roundish oblong medium-large dull green-yellow fruit. Thin skin with a whitish bloom. Tender yellowish juicy flesh. Karl Olson of Connecticut recommended it to us, writing, "The biggest good plum I have is Oullins, which…looks like a pale prune plum [and] fills the hand like a jumbo egg. Quality is best…firm and sweet and aromatic, and freestone. Tree is upright and healthy. I'm surprised more people don't offer it." Our scionwood comes from Karl's orchard. Z4. **ME Grown.**

1787 Oullins, $16.00

Stanley Late Summer. *P. d.* Agen x *P. d.* Grand Duke. NY Station, 1926. Most popular European prune plum in America. Excellent for cooking, eating, canning and drying. Medium-to-large fruits with dark blue skin. Green-yellow firm but tender juicy fine-grained sweet flesh. Reliably bearing fast-growing adaptable medium-to-large funnel-shaped tree produces healthy vigorous annual crops. Z4. **ME Grown.**

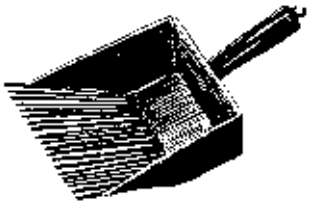
1820 Stanley, $16.00



Yakima Summer. Seedling discovered about 1902, introduced by Washington Nurseries, Bingen, WA, 1925. Large somewhat oblong bright mahogany-red fruit with tender sweet very firm and very high quality yellow flesh. Freestone. Vigorous upright tree. A second variety for pollination is recommended to increase productivity. Minnesota nurseryman Frank Foltz considers it the hardiest European type he has tested in his trials in Princeton. Has shown no dieback in our trials. Oddly enough, it may be the hardiest European plum available in spite of its lowly beginnings 50 miles due west of Portland, OR, on the north shore of the Columbia River. Our original scionwood came to us from Frank. Z4. **ME Grown.**

1835 Yakima, $16.00

Small Fruits & Berries



Lowbush Blueberry *Vaccinium angustifolium* 6x24" Blueberry growers in Maine usually don't bother with the "lowbush" distinction; to them, this is the only true blueberry. Though both plants and berries are diminutive, the taste is supreme. Lustrous blue-green foliage in summer followed by an amazing combination of bronze, orange and scarlet in the fall. Grown in Maine long before Europeans came Downeast, where thousands of acres are now under production. Commercial blueberry land is burned in the spring to clear out the weed competition. A crop will then follow a year later. To speed harvesting, berries are usually raked rather than hand-picked. I do either, depending on my mood and the availability of my rake. You don't have to burn and rake to have a small-scale planting. Native to northeastern U.S. Z2. **ME Grown.** (2-yr transplants)

1900 Lowbush Blueberry, $9.00

Lowbush Blueberries
Woodsy dry poor acid soil (pH 4.0-5.2) is a prerequisite for lowbush blueberries. If you've got White Pine, you're probably all set. Plant 12" apart each way and cultivate as a ground cover. Generally self-pollinating; other blueberries nearby will help ensure pollination. Full sun is best for maximum fruit production. Keep your patch weed free.

Highbush Blueberries *V. corymbosum* are native to North America. While usually associated with New Jersey and Michigan, many of Maine's lakes are lined with massive stands of highbush blueberries. Grazing the shore requires only time and a suitable vessel; I prefer kayak or canoe. The beautiful vigorous shrubs are extremely easy to grow at home, productive and reliable, with few disease or insect problems. By planting several varieties, you can harvest berries from early July through most of August. **Two varieties are required, three or more recommended, for pollination**. (12-30" 2-yr old plants)

Bluecrop Early-Midseason. GM 37 (Jersey x Pioneer) x CU-5 (Stanley x June), USDA, NJ, 1952. Medium-sized firm subacid fruit; very light blue berries of high dessert quality, resistant to cracking. Medium-large open clusters. Vigorous, upright 4-6' consistently productive bush. Ripens over a long season. May not be perfectly ripe when they first turn blue. Give them a few more days to reach full flavor before picking. Pruning will help maintain fruit size. Not recommended for coldest areas. Z4. **ME Grown.**

1920 Bluecrop, $8.00

Blueray Mid. GM 37 x CU-5, USDA, NJ, 1955. Large firm dark blue berries of high dessert quality in small clusters. Considered the best-tasting by nearly everyone who grows highbush blueberries. Very vigorous 4-6' bush with upright spreading habit. Considered the leading "you-pick" variety; consistently productive. Z4. **ME Grown.**

1925 Blueray, $8.00

Duke Early. G-100 (Ivanhoe x Earliblue) x 192-8 (E-30 x E-11), USDA, NJ, 1987. Recent release considered a big improvement over Earliblue, the standard early cultivar. Firm medium-sized light blue fruit with mild sweet flavor, excellent for fresh eating or processing. Vigorous upright high-yielding 4-6' bush. Long stems and loose clusters. Z4.

1935 Duke, $8.00

Jersey Mid-Late. Rubel x Grover. USDA, 1928. Medium-to-large dark blue berries in large loose clusters. Vigorous erect hardy bush, 5-7' tall. Productive, widely grown, adapted to a wide range of soils, highly praised, easy to grow and suited to the New England climate. We're very pleased to have this old standard back on the list. Z4.

1950 Jersey, $8.00

Northland Early. Berkeley x 19-H, Mich St U, 1967. Early highbush x lowbush type bears long loose clusters of medium-small dark blue berries with excellent wild flavor. Very vigorous and productive, 3' moderately spreading bush has limber branches which tolerate snow well. Good landscape, bird forage and dessert qualities. Hardy. Z3. **ME Grown.**

1965 Northland, $8.00

Patriot Early-Mid. US3 (Dixi x Michigan LB-1) x Earliblue (Stanley x Weymouth). U Maine, 1976. Partial lowbush parentage. Adaptable to many soil types. Large firm berries with good color and excellent flavor. Upright open spreading 4' bush. Tolerant or resistant to some strains of soil fungus. Hardy. Z3.

1975 Patriot, $8.00

Highbush Blueberries are shallow-rooted and like light acid soil (pH 4.0-5.2), plenty of water, good drainage, and plenty of organic matter. They do not need much added nitrogen. Space them 3-6' apart, towards 3' for the shorter varieties, in rows 8-10' apart. If your soil is lacking acidity, add peat, sawdust, oakleaf mold, woods humus, sulfur, or ammonium sulfate (3 oz per bush).

Dig a hole at least twice the size of the root ball. If you choose to use peat or sawdust, soak it and then mix it with soil at a one-to-one ratio. We suggest soaking roots in Agri-gel. Plant at the same depth as in the nursery (or slightly deeper). Do not let the roots dry out! Pack the soil firmly and water thoroughly. At planting time, prune off 1/3 to 1/2 of all growth. Plants require at least 1" water per week during the growing season. Fertilize modestly with a balanced 1-1-1 fertilizer in the spring. Remove all flowers for the first two years.

Fruit is produced on vigorous one-year shoots off healthy canes. As canes age they become twiggy and less productive. Begin pruning after three years. Cut out weak or dead canes and dead tips. Each bush should be allowed to grow 6-10 canes varying in age from one to six years old. Thereafter, remove dead canes and those over 6 years old and encourage new replacement canes. Bushes with regular moderate pruning produce the most berries.

Berries may need net protection from birds. One of the best arrangements I've seen is John Meader's netted "house" in Buckfield. He has about 40 bushes growing under a framework made of posts and 2x4s and completely covered in netting.

Competition with grass may weaken and kill your blueberries. Mulch heavily (3-6" or more) every year with cardboard, wood chips, hay, sawdust, even old slab wood. When using sawdust you may want to compensate by adding extra nitrogen.

Grapes prefer soils with pH of 5.5-6.5. They can stand a lot of heat. Try planting them near a stone wall, a big boulder, or the south side of a building, in full sun. Full sun is important. Although soil should not be rich, it should be well-drained with plenty of organic matter. Space them 8' apart in rows 8-12' apart.

Spread the roots out, planting the crown even with the soil surface. Do not prune roots. Pack soil well. Water and mulch well. After frost danger has passed, prune vines back to 3-5 strong buds. In later years spread manure and mulch with hay or straw.

Grapes require annual pruning and a trellis or arbor, though some friends let them grow right up into trees. All systems for growing grapes involve removal of most growth in spring or late fall, encouraging new canes, as fruit is produced on these canes. There are many systems for training grapes. Some are suited to laying down and covering tender varieties over winter. Any good book on grape growing will show you several options. We suggest the Hudson River Umbrella or the Four-arm Kniffin system.

Grapes rated for Zone 5 can be grown in Zones 3 and 4. To prevent winter injury, remove the vine from the trellis in fall, lay it on the ground, and bury with just enough soil to cover. This task is neither difficult nor time-consuming, and does work.

Grapes *Vitis* spp. Grapes are easy to grow and can bear plentifully even in northern New England. Our vines bear consistently and heavily almost every year. You can eat seeded varieties right off the vine if you don't mind "grape nuts."

Most grape varieties are bred from a combination of different species, *V. labrusca* and *V. vinifera* being the most important. *Labrusca* is native to the eastern U.S., has a wild tart musky (or foxy) flavor, and is hardy and disease-resistant. Concord is the best-known of the Labruscas. *Vinifera,* native to Europe, is extremely high quality and the most important wine grape in the world, but is not hardy and is prone to disease. Riesling and Chardonnay are the two hardiest pure *vinifera* grapes.

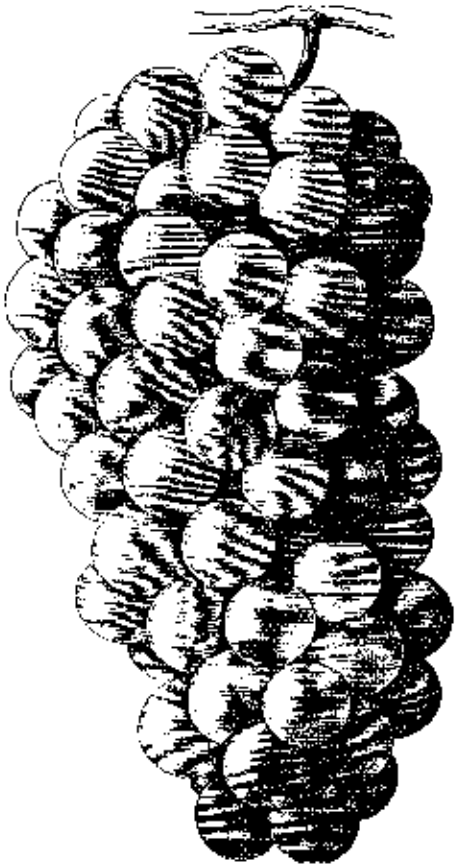
In central Maine, "very early" grapes begin ripening in mid-August, while "midseason" ripen mid-September. Late-season Concord, a standard elsewhere, does not ripen in many northern areas. **Most do not require a second cultivar for pollination.** (1-2 yr well-rooted vines)

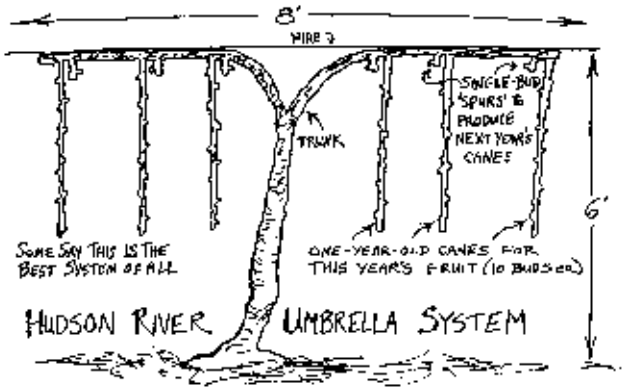
Beta Midseason. *V. riparia* x Concord. Originated by Louis Suelter (pronounced *Sool*-ter) in Minn, 1881. Beta was named after his wife and is pronounced *Bett*-uh not *Bay*-tuh. Old standby, excellent for juice, jelly and jam. Good eating off the vine when completely ripe. Medium-sized black berries in moderately compact to loose clusters, ranging in size halfway between Delaware and Concord. Early to bloom, early to ripen. Vigorous healthy productive vines, extremely hardy. Z3.

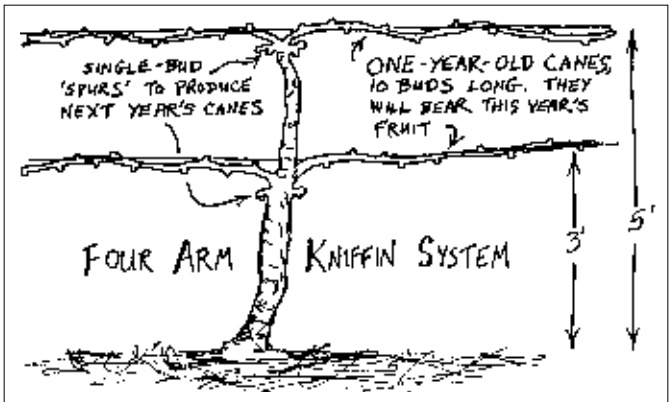
2010 Beta, $7.00

Bluebell Mid. MN 158 (Beta x unknown). Developed by JM Dorsey, U Minn, 1944. This grape does everything well. Extremely hardy (-30˚F) labrusca type ripens 2-3 weeks earlier than Concord. Delicious sweet flavor makes them excellent for fresh eating, jelly and juice. Clusters of medium-sized dark berries with a heavy blue bloom. Strong, productive, vigorous—but not rampant—vine. Immune to most or all fungal diseases. Rare. Z3.

2020 Bluebell, $7.00




8'
WIRE
TRUNK
SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
6'
SOME SAY THIS IS THE BEST SYSTEM OF ALL
ONE-YEAR-OLD CANES FOR THIS YEAR'S FRUIT (10 BUDS OR SO)
HUDSON RIVER UMBRELLA SYSTEM


SINGLE-BUD 'SPURS' TO PRODUCE NEXT YEAR'S CANES
ONE-YEAR-OLD CANES, 10 BUDS LONG. THEY WILL BEAR THIS YEAR'S FRUIT
FOUR ARM KNIFFIN SYSTEM
3'
5'

Growing Grapes on an Arbor

Train one or more vines onto an arbor or gazebo. Encourage several permanent arms off the trunk and then every winter remove 70-90% of the the past summer's growth. Next summer new fruiting canes will grow off your permanent arms.

Pruning Grapes in the Four-Arm Kniffin System

First year: Cut plant back when planting to a single stem, 6" long with two to three buds, after the last danger of frost has passed.

Second year: Set up two wires, 3' and 5' high, stretched between posts. Cut plant back to a single stem, 6 feet long and tie it to the top wire. Leave 4-6 buds near each wire and remove others.

Third year: Select 8 canes, 4 for each wire, and remove the rest. Tie two canes to each wire, one in each direction. Cut these four canes back to 10 buds each. Cut the remaining four canes back to two buds each.

Later years: In the spring, remove last year's fruiting canes. Select eight new canes. Cut 4 of them to 10 buds each, and tie them to your wires. Cut the remaining four back to two buds each. These will produce next year's fruiting canes. Remove all other canes. The number of buds left on the fruiting canes may be adjusted to encourage more fruit or larger size.

Concord Seedless Mid. Bud sport of Concord. Good seedless grape for the homeowner. Will ripen in many areas where Concord will not, with a sweeter flavor. Light producer of small berries in small clusters. May be the hardiest seedless grape. Mine shows no winter damage and I leave it up on the arbor all winter. Good disease resistance. Z4.

2045 Concord Seedless, $7.00

Frontenac Mid-late. MN1047 *V. riparia* 'RIP 89' x Landot 4511. U Minn, about 1995. An excellent new hardy red wine grape from the University of Minnesota's grape breeding project. No labrusca or riparia flavor. Wine has been winning acclaim throughout the Upper Midwest and has even been mistaken for Pinot Noir by reputable wine judges. Very large loose clusters of small berries. Vigorous very productive largely disease-free vines. In the Minnesota Grape Growers Association's *Notes from the North*, John Marshall writes, "Though the sugar may rise to impressive levels early in September, the grapes are not nearly ripe. Ignore the sugar levels and wait until September 20th. The acid will drop and the wonderful black cherry flavors that will make this grape famous will multiply." Maine grape researcher and tester Jerry Rodman adds, "Frontenac has made some good wines, but is very high in acid and is probably best for areas with high heat accumulation (which helps to lower its acid)." Z4/5.

2075 Frontenac, $7.00

Kay Gray Mid. ES217 (MN78 x Golden Muscat) x open-pollinated, probably by Onaka. Swenson intro, Osceola, WI, 1981. Medium-sized golden-white slip-skin berries in medium-sized tight clusters. Mild sweet fruity flavor. For dessert or juice and a decent wine for blending. Some years it will produce an exceptional varietal wine on its own. Extremely good disease resistance. Very reliable moderately vigorous productive vine. Very hardy. Z3.

2090 Kay Gray, $7.00

King of the North Mid. *V. riparia* x Concord-type. Madison, WI. Dark-skinned table and wine grape originally named and offered by Jung's Nursery many years ago. Rediscovered during the last few years and gaining many enthusiasts. According to Minnesota grower and winemaker John Marshall, King of the North is the one variety he recommends for both a good table grape and a decent red "Concord style" wine. In a recent email he wrote to me that it's "very delicious particularly as a home wine although it is also meeting success as a commercial wine grape." Hardier and better tasting than Beta, also produces light red sweet tasty juice. Ripens slightly later than Bluebell. Z3.

2096 King of the North, $7.00

Prairie Star Mid. ES 3-24-7 (ES 2-7-13 x ES 2-8-1) Elmer Swenson introduction, 1984. Blocky long slightly loose clusters of medium-sized white fruit. Excellent sugar and acidity for winemaking. Makes a nice classy wine with no foxy flavor. Tom Plocher and Bob Parke reported in *Notes from the North* that the wine has "a fullness in the mouth and finish that is uncommon among our hybrids....In some years it develops a delicate floral nose that allows it to stand as a single variety wine. In most years however, Prairie Star is an ideal blending component to add body and finish to thin white wines." A favorite of Jerry Rodman who has tested dozens of grape varieties at his Litchfield, ME, vineyard. Prefers heavier fertile soils. Disease-resistant and very hardy. Z3/4.

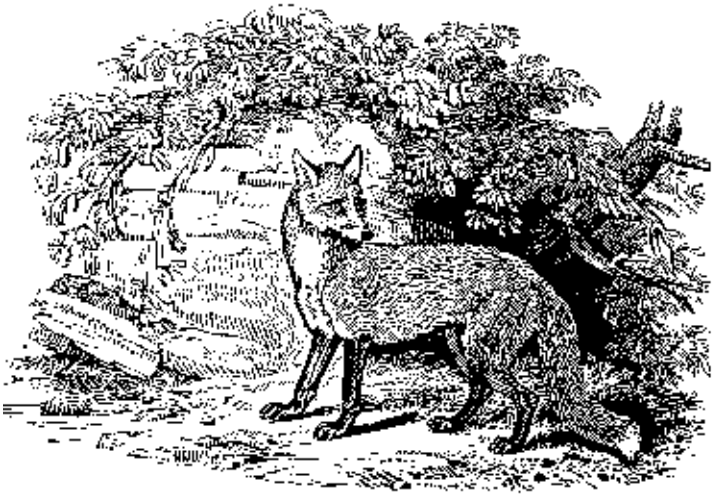
2120 Prairie Star, $7.00

Reliance Seedless Very early. Arkansas 1163 (Ontario x Suffolk Red). Arkansas Stn, 1982. Probably the highest-quality seedless grape for the North. Large loose clusters of tender melting sweet pinkish-red fruit with a strawberry-like flavor. Fresh eating or juice. Stores well in root cellar for 1-2 months. Seems perfectly hardy in our Zone 4 trials. Lay vines down for the winter in coldest areas. Extraordinarily vigorous disease-resistant vines. Z4/5.

2125 Reliance Seedless, $7.00

St. Croix Mid. ES 242 (ES 283 x ES 193) Swenson intro, Osceola, WI. Juicy low-acid medium-sized blue grapes in medium-sized bunches. High quality pale red juice and vinifera-type fruity dry red wine. Very popular as the primary variety in blended red wines produced by Minnesota's small but thriving wine industry. Disease resistant. Extremely hardy. Z3/4.

2135 St. Croix Grape, $7.00



Valiant Early. Fredonia x *V. riparia*. SD Sta, 1982. As hardy as Beta and considerably better tasting. Medium-sized blue-black table grape similar to Fredonia makes very good eating right off the vine, excellent juice and jelly. Reliable, productive, free of astringency. Tight 4" clusters, frequently with a "shoulder." Extremely hardy. Precocious; may need thinning in early years. Susceptible to downy mildew and black rot. Very popular in the upper midwest where the summers are consistently drier than ours, although it does very well here in dry years. Z3/4.

2170 Valiant, $7.00

Worden Mid. *V. labrusca.* Concord seedling. Minetto, NY, 1863. For those who have tried to grow Concord in the North and got frustrated when the frost ruined the fruit. Similar to Concord in many respects, but ripens two to three weeks earlier. Juicy sweet mildly foxy flavor, with fresh eating quality superior to Concord. Large long broad tapering clusters of medium-sized round dark purplish blue-black berries with a heavy bloom. Thin tender skin. Greenish translucent flesh. Healthy hardy vigorous productive vines. Z4.

2190 Worden, $7.00

Raspberries *Rubus* spp.

The ruby red and golden yellow cultivated raspberries growing in the garden are native to North America, Europe and Asia. They are usually identified as *R. ideaus* or *R. ideaus* var *stirgosus.* Hyland and Steinmetz's *Trees and Other Woody Plants of Maine* lists 53 different *Rubus* species and subspecies.

Everbearing types bear on first-year canes or primocanes. We don't offer Heritage, a popular producer of high-quality fruit, because it ripens too late for growers in Zone 4 and cold areas of Zone 5.

Summer-bearing cultivars bear on second-year canes or floricanes. Harvest leaves for medicinal use from first-year canes of summer-bearing varieties. A leaf and fruit vinegar is very high in minerals, and the leaf tea makes a great tonic for both uterus and prostate.

A second variety is not needed for pollination. Prior to planting, soak canes in Agri-gel, in the sidebar and also available in the Organic Growers Supply section of the Seed catalog. (well-rooted bare-root canes)

August Red Late. NH R7 [Durham x NH 102 (dwarf F2 seedling x Taylor)] x NY 287 [NY 18810 (Marcy x Indian Summer) x NY 20990 (*R. strigosus* selection)] Developed by EM Meader, UNH, 1973. An everbearing variety that is the one hope when no other raspberry will survive. Can be killed back to the snow line and will still bear heavily that summer. Medium-large crimson fruit has excellent flavor. Compact erect 3' bush bears earlier than other everbearers. Mow them down to the ground in late fall. They come back the next spring and produce in midsummer, about August 10th in central Maine. Z3. **ME Grown.**

2220 August Red, bundle of10, $24.00

Boyne Early-Mid. Chief x Indian Summer. Morden Res Stn, Manitoba, 1960. Round-conic medium-sized berries with an intense deep dark, almost purple, color. Strong aromatic tart raspberry flavor and a perfect medium-soft texture. It's easy to eat a lot of them in a very short time. Grower John Meader spoke glowingly of Boyne during our visit to his raspberry trials. He called it "an excellent, excellent variety. Boyne is the one to beat if you're going to introduce a new raspberry." Extremely hardy. Shows no tip damage in Zone 3. Leaves tend to curl down over the fruit making it more difficult to pick if you're in a hurry. Still, according to friends who make honey and fruit butters, there is no better raspberry for processing. Yields well. No disease and very little pest damage. Z3.

2240 Boyne, bundle of 10, $15.50
2241 Boyne, bundle of 25, $25.50

Raspberries and Blackberries

Cane fruits have shallow perennial roots and biennial fruiting canes. They prefer full sun, good air circulation and well-drained soil, rich in organic matter, with pH of 5.8-6.2. Avoid soils where tomatoes, peppers, potatoes, strawberries or wild brambles have grown because they all are subject to verticillium wilt, which may remain in the soil. Plant rows 6-12' apart to facilitate cultivation. See below for planting distances. Before planting, work into the soil 15 bushels dry manure or 10 bushels fresh manure per 100 sq feet. A well-kept patch can last for 10-20 years.

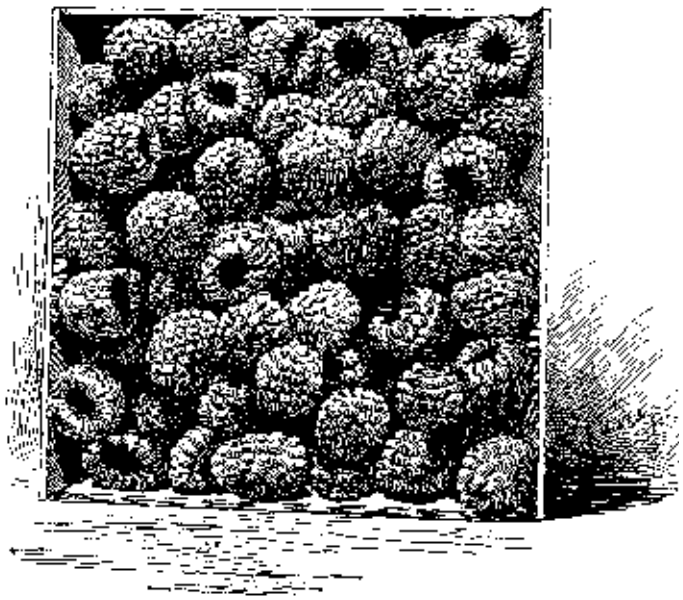
Be sure each hole is large enough to spread out the roots. Do not allow the fine roots to dry out. We suggest soaking roots in Agri-gel for 1-2 hours before planting. Plant 1-2" deeper than in the nursery and then cut the canes off at ground level.

Cane fruits should be trellised between two temporary or permanent wires about 3-4' off the ground and 18-36" apart. Mulch with a thick layer of woodchips or sawdust. Fertilize liberally each spring with up to 100 lbs manure or compost, 8 lbs bloodmeal, or 14 lbs cottonseed meal per 100 foot row. Plants require 2" water per week during the growing season.

- Summer-bearing varieties: Space 2' apart. After harvest, prune to the ground the canes that carried fruit or remove them the following spring. Thin the fresh first year canes to about 3-4" apart. They will bear fruit next year. During the growing season cut back canes to 5' if they are bending over severely.
- Purple and black raspberries: Plant in hills 3' apart. Basic pruning is same as summer-bearing varieties. As they fill in, thin to 5-8 canes per hill. During the early summer, pinch back tip of first year canes to 2½-3' tall. This will encourage lateral fruiting branches. These will need very little, if any, support and may not require trellising. In the following spring, cut these fruiting laterals back to 8-12 buds.
- Everbearing Raspberries: Plant 9-15" apart. Cut all canes to the ground in late fall after leaves drop, or in early spring; first-year canes will fruit in late summer.
- Space blackberries 3-4' apart.

Fall Gold Late. (Taylor x Korean Tree Berry) Developed by EM Meader, UNH. Sister of Fall Red. At last, a hardy yellow-fruiting variety. Exceptionally sweet large round golden-yellow fruit. Moderately firm and juicy. Tall sturdy canes rarely need staking. Moderately vigorous, high yielding over a long period. Excellent disease resistance and hardiness. Hardy to -25°. Will bear on first year (primocanes) or second year (floricanes). Mow to the ground after fruiting if you like. Z4. **ME Grown.**

2260 Fall Gold, bundle of 10, $24.00



Prelude Early. NY 1009. NY St Exp Stn. We've decided to offer this newly developed red raspberry after several years of trials at John and Pat Meader's Hardy Maine Nursery in Buckfield. John wrote, "I'd strongly recommend Prelude. It showed hardiness equal to Boyne last winter [2002-03] and fruits the earliest of all varieties I've observed (over 30).… I'd readily substitute it for Killarney, since Killarney's fruiting period pretty much overlaps Boyne. Killarney is not as productive as Boyne, and Killarney's fruit tend to crumble. Prelude would preceed Boyne nicely; it has good fruit (taste, firmness, size) and seems quite productive; it fruits well over two full weeks." Firm red medium-sized fruit is easy to see and pick, ripens in central Maine in early-mid July. Can be grown as a primocane type or floricane type. Suckers freely. Z4.

2330 Prelude, bundle of 10, $15.50
2331 Prelude, bundle of 25, $25.50

Royalty Purple Mid. (Cumberland x Newburgh) x (Newburgh x Indian Summer). NY Station, 1982. Distinctly flavored cohesive fairly firm large berries make outstanding jam and jelly, and even better fresh eating. Their flavor is different from the red raspberries, with a hint of black-raspberry. Extremely robust non-suckering plants are very productive and open-formed; the berries are right in your face and easy to pick. Ready to harvest when they are deep purple, somewhat later than the reds. Summer-bearing. Usually considered Zone 4 but is proving itself into Zone 3 with occasional slight tip dieback. Z3/4.

2340 Royalty Purple, bundle of 10, $28.00

Taylor Mid. Newman x Lloyd George. NY Station, 1935. Often considered the best-flavored raspberry, as well as one of the hardiest, though suffers minor frost damage in Zone 3. Large pinkish-red fruits are firm, long, conic. Vigorous highly productive sturdy canes can grow up to 9', though usually need no support. Summer-bearer adaptable for "you-pick" and commercial use. In some places virus has caused canes to die out after a few years. Z4.

2360 Taylor, bundle of 10, $15.50
2361 Taylor, bundle of 25, $25.50

Blackberries *Rubus* spp.

We will have a new extremely hardy blackberry available in 2005. Stay tuned!

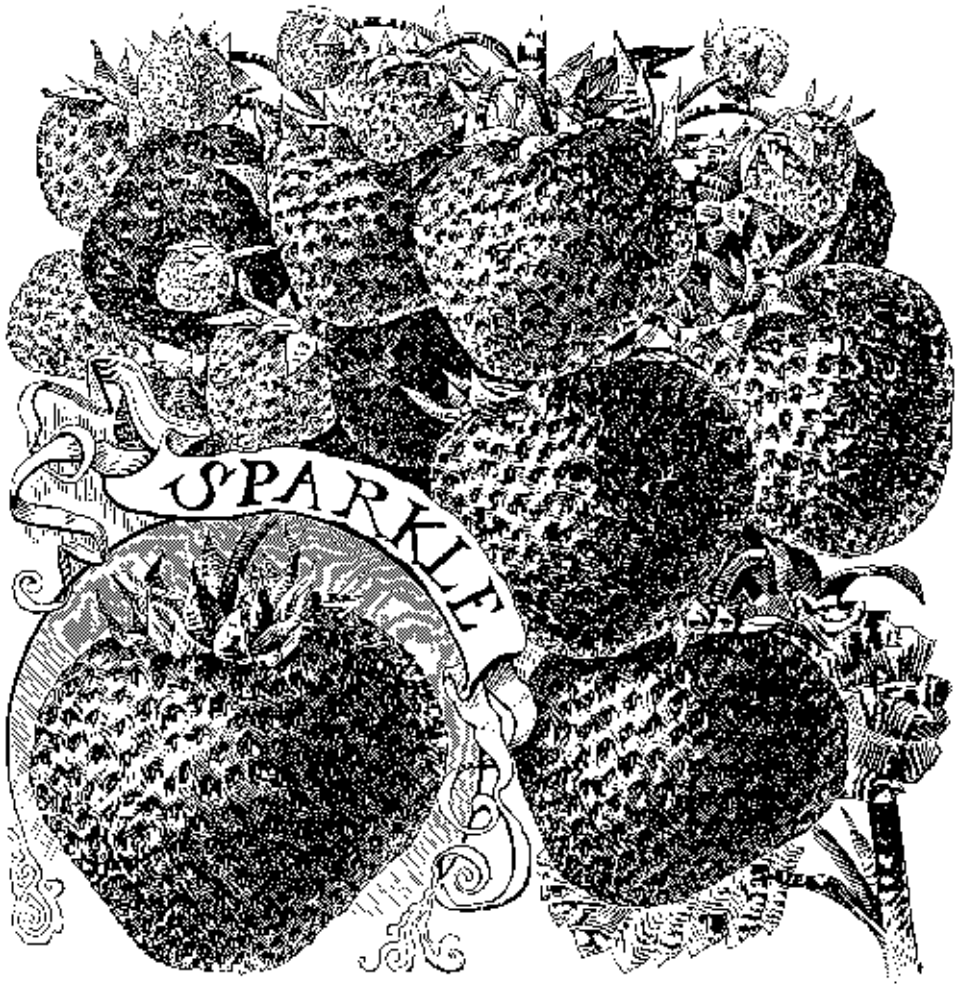
Agri-gel A hydrogel formulation which absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, non-toxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with one to three gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. ½ oz.

7510 Agri-gel, $2.00

Strawberries *Fragaria* x *Ananassa*

A major highlight of every summer is picking Sparkles. Is that not heaven? Although no one knows where the common name *strawberry* originated, idle speculation has it that it comes from the practice of putting straw down between the rows for pickers to sit on while they sample the fruit and catch up on each other's lives. Technically not berries or fruits at all, strawberries are enlarged fleshy receptacles. The fruits are those tiny embedded "seeds" (they're not seeds, but achenes which have seeds in them). Modern strawberries, developed about 1830, are a hybrid of *F. chiloensis* (native of Chile) and *F. virginiana* (native of North America).

50 plants will plant from 150-250'. (virus-free bare-root stock)



Earliglow Early. MdUS 3861 (Fairland x Midland) x (Redglow x Surecrop). Medium-sized berries. Best for fresh eating and freezing. Excellent flavor for an early berry. Called the best flavored of all varieties by Barbara Bowling in *The Berry Growers Companion*. Also a favorite of local strawberry grower Shaun Keenan. Resistant to red stele and verticillium wilt. Z3.

2410 Earliglow, bundle of 50 for $11.00

Jewel Mid-Late. NY 1324 [(Senga Sengana x NY E-58) x Holiday] NY Station, 1985. Added to our list last year at the suggestion of Shaun Keenan at Sand Hill Farm in Somerville. There's no better spot to do strawberry trials than Sand Hill. As I looked out over the crowd in July it appeared that nearly everyone there would agree. Lots of red stains on the lips and I don't mean lipstick. Shaun even went so far as to say that Jewel tasted almost as good as Sparkle. Although I don't think I'd go quite that far, I was very impressed with the berry. Large bright red glossy fruit is firm, sweet and slightly aromatic. Unlike Sparkle, Earliglow and many other varieties, it keeps its size all season. Extremely popular with commercial growers. Good freezing quality. Low incidence of fruit rots and foliar diseases. Not resistant to verticillium or red stele. Z4.

2420 Jewel, bundle of 50 for $11.00

Northeaster Early. MdUS 4787 (MdUS 4380 x Holiday). USDA, 1996. Very large firm fruit with strong aromatic flavor is productive and hardy. Recent introduction that shows excellent promise throughout much of New England. Has even done well in our trials in Aroostook County. Ripens about the same time as Earliglow. Recommended both for homeowners and for large plantings. Resistant to soil diseases and tolerant to foliage disease. Very hardy. Z3.

2424 Northeaster, bundle of 50 for $11.00

Sparkle Mid-Late. Fairfax x Aberdeen. NJ Ag Exp Stn, 1942. Although not a favorite with commercial growers due to moderate crop size and smaller berries, I've yet to taste a strawberry that comes even remotely close to Sparkle. To me, they possess a flavor that can only be described as the essence of strawberry. The best in an early year, the best in a late year, the best this year, last year, every year. This is *the* berry if you want to eat the perfect strawberry. Soft berries make delicious fresh eating and are also excellent for jams and freezing. First fruit set is large; the rest are small. Resistant to most strains of red stele. Blooms late and is rarely affected by spring frost. Z3.

2430 Sparkle, bundle of 50 for $11.00

Tristar EB 18 x MdUS 4258, USDA, MD, 1981. Everbearing "day-neutral" strawberry sets flower buds regardless of day length, fruiting all summer and into fall. Remove flower buds for the first six weeks after planting and you'll still get a crop the first year. Medium-sized firm deep-red berries of excellent quality and flavor. Resistant to red stele and verticillium wilt. Z4.

2442 Tristar, bundle of 50 for $16.00

Strawberries

Keep cold or refrigerate between arrival and planting. Strawberries require good air drainage, well-drained fertile soil with pH of 5.8-6.2, thick mulch and full sun. Avoid soils where tomatoes, peppers or potatoes have grown in the past 4 years. Plant strawberries at the same depth as they were in the nursery, with the middle of the crown at soil level. Keep your patch free of weeds. They require 3/4-1" water per week during April, May, August, September and October. Mulch with hay or straw in late fall to protect plants over winter. In the spring, pull mulch off plants and place between rows where it will keep fruit dry and clean during the summer. It can also be raked back over the plants if frost threatens flower buds. Floating rowcover may also be used for winter and frost protection.

June-Bearing Strawberries

Matted Row system: Set plants 12-18" apart in rows 3' apart. Allow plants to produce runners freely and fill in the row. Remove all flowers the first year. Harvest berries the second summer. Immediately after harvest, fertilize liberally with compost or aged manure and renovate the row. By hand or with a tiller, narrow the row to 12" wide. Thin plants to 4-5" apart within the row. By this method a bed can last about 5 years. Then plow it under and start again.

Day-Neutral Strawberries

(like Tristar) flower regardless of day length as long as temperatures are between 35 and 85°, and produce fruit from June to October. They are also uncommonly productive—about one pound of fruit per plant the first year, and slightly less the second year. Productivity peaks in August the first year. The second year, berry size decreases in the hottest weather and increases in cooler weather.

They are heavy feeders and benefit from 3-4" of manure worked 4-6" into the soil prior to planting, and monthly side-dressing of manure throughout the season. Plant 5-9" apart. Mulch with black plastic or thick straw immediately after planting. Remove flowers for the first six weeks, and remove all runners the first season. Mulch in late fall. Side-dress with manure monthly during the second season beginning in May. Till under after the second year and begin again.

More Edibles

***Actinidia arguta* Hardy Kiwi** Productive climbing vine that produces delicious grape-sized kiwi fruits in late summer. Unlike supermarket kiwis, the skin is smooth and edible. Easy to grow in rich well-drained soils. Will begin producing in 5-9 years. No significant pest or disease problems. Some growers have been frustrated with vines that have proven unproductive or not hardy. After consulting several of Maine's long-time growers, we collected cuttings from fruiting combinations here in central Maine. We think you'll be pleased with our choices. We'll be offering more varieties in the years to come. Both male and female plants required for fruit. One male will pollinate at least three females. Z4. (well-rooted 2-year-old transplants)

***A. a.* Ananasnaya** (female) Summer. I.V. Michurin introduction, USSR, 1972. May be a hybrid of *A. arguta* and *A. kolomikta*. Oval fruit, about 1 1/2" long. Dark green smooth skin. Light green juicy flesh with a pineapple scent and flavor. *Ananasnaya* means pineapple-like. Bears reliably. **ME Grown.**

2444 Ananasnaya Kiwi, $12.00

***A. a.* Geneva #2** (female) Late Summer-Early Fall. George Slate, NY Ag Exp Stn, Geneva, NY. Small-medium fruit, about 1" in diameter. Very vigorous and productive. Good sweet flavor. **ME Grown.**

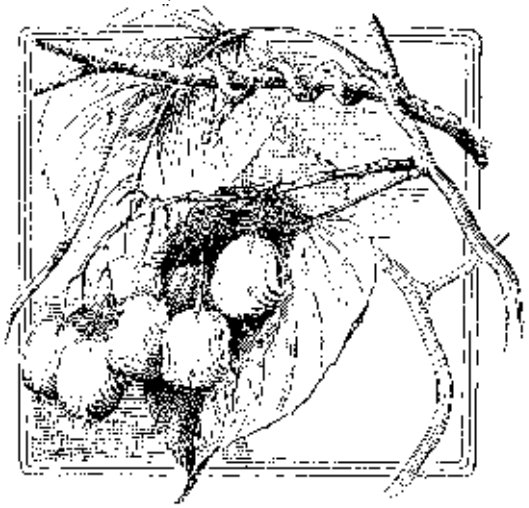
2445 Geneva #2 Kiwi, $12.00

***A. a.* Michigan State** (female) Summer. Michigan St Univ. Grower Tom Vigue calls the thumb-shaped, thumb-sized fruit, "sweet and most highly luscious." When I tasted the fruit at Tom's several years ago, I thought it was absolutely delicious. **ME Grown.**

2448 Michigan State Kiwi, $12.00

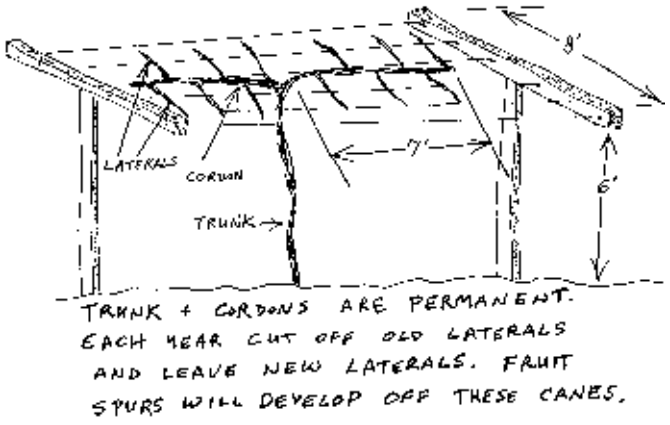
***A. a.* Cornell** (non-fruiting male) NY Ag Exp Stn, Geneva, NY. Very hardy reliable pollinator. Will pollinate any of the above female kiwis. Very vigorous grower. **ME Grown.**

2452 Cornell Kiwi, $12.00



***A. kolomitka* Arctic Beauty Male Kiwi** 10-20' climbing twining ornamental vine. While not as vigorous (or rampant) as the arguta kiwis, it will decoratively cover a porch, arbor or small tree with its stunning foliage. Young leaves emerge purple, then become an amazing variegated pink, white and green. 1/2" white 5-petaled fragrant flowers. Prefers moist neutral to slightly alkaline well-drained but average-quality soil, full sun to partial shade. Heat, excessive fertilization and shade will reduce the color. These are males so they will not fruit. They should be treated like an ornamental. At some point we hope to offer superior female cultivars. Native of eastern Asia. Z3. **ME Grown.**

2454 Arctic Beauty Kiwi, $12.00



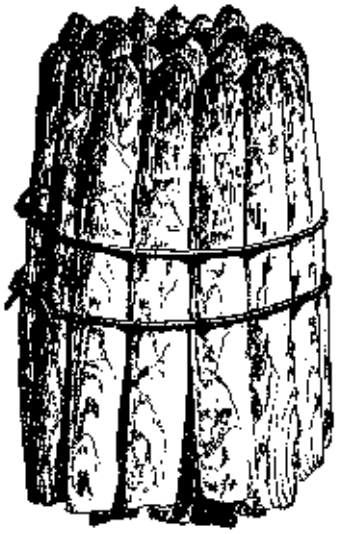
Kiwis are dioecious vines, meaning you must plant a male plant to pollinate the fruiting female plants. They are also extremely vigorous and require a rugged trellis or arbor and heavy pruning. Plant vines 10' apart each way in moderately rich moist, but well-drained, soil (pH 5.0-6.5). Plant a male plant within 30' of any female to be pollinated. One male will pollinate several females. Although the plants are quite hardy, the flowers and foliage are frost sensitive. Planting with a northern exposure will delay budding-out in spring and reduce risk of frost damage. Protecting from winter winds and intense winter sun is also recommended. Mulch with hay or wood chips. On poor sites fertilize with compost annually.

On a trellis: Train a single trunk to the trellis wires and then train two permanent 7-10' cordons (arms) off the trunk. Each winter remove at least 70% of old growth, leaving a dozen or so one-year-old laterals. That year's fruit will develop on fruit spurs growing off these one-year old canes (laterals). On extremely rampant vines summer pruning may be required to keep the vines from choking out your farm.

On an arbor or gazebo: Once established, prune 70% of the old growth each year and leave some new canes for this year's fruiting.

***Armoracia rusticana* 'Kentucky Derby' Horseradish** Very vigorous perennial with large dock-like leaves and spicy hot roots, savored for centuries for its culinary and medicinal qualities. Selected and named after years of trying to get it out of our gardens here at Super Chilly farm. Grows as fast as a triple crown winner. By the time you've removed it here, it's already over there. As hot as a fiery 2-year-old colt. This is no gelding. You may need a few Mint Juleps to cool you down after even a dab. Will produce seemingly endless 1/4-1" roots that will fill whatever space you give it and then some. Plant it where you want it because you will probably never get it all out. Prefers rich soil. Leaves can be cooked as greens. Harvest roots in the fall. Plant with the slanted cut down and the flat side up. Native to northern Europe. Z3. **ME Grown.** (#1 roots)

2455 Horseradish, bundle of 5 for $5.50

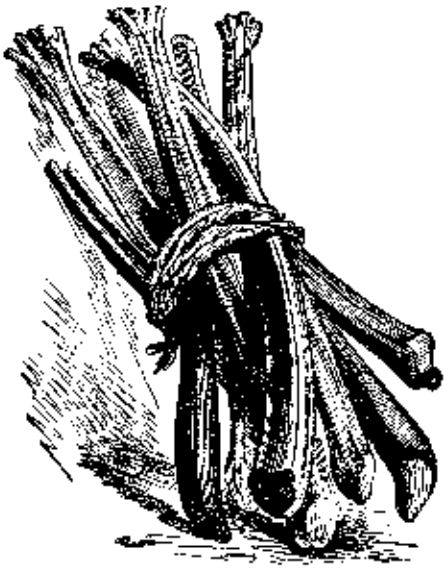


***Asparagus officinalis* 'Jersey King' Asparagus** Early. Rutgers U. Because wages account for about 70% of the cost of producing the tasty spears for market, asparagus production has gone global. Even though California asparagus growers pay workers minimum wage, they can't compete with overseas producers. As with many other crops, domestic asparagus may become a thing of the past. It may not be long before you *have* to grow your own if you want it grown in the USA. Jersey King is one of the newer all-male hybrids which are 2-3 times more productive than the open-pollinated types It has excellent tolerance to asparagus rust and fusarium crown rot. Produces high yields of large-diameter tender spears. Z4. (large-rooted 1-yr crowns)

2464 Jersey King Asparagus, bundle of 25, $12.00
2465 Jersey King Asparagus, bundle of 50, $19.00

***A. o.* 'Purple Passion' Asparagus** Early. Developed from the old Italian heirloom *Violetto di Albenga*. Brian Benson introduction. Very large deep purple stalk with a creamy white interior. Sweeter and less stringy than its green counterparts, meaning you can use more of the spear. Tender enough to eat raw in salads. Turns green when cooked. (large-rooted 1-yr crowns)

2477 Purple Passion Asparagus, bundle of 25, $12.00



***Rheum rhabarbarum* 'MacDonald' Rhubarb** MacDonald College, Quebec. A perennial herb of the buckwheat family whose clumps of juicy acid leaf stalks have been a northern food staple every spring for thousands of years. Most famous these days for pies and wine, but also great for sauce, breads and juice. MacDonald has extremely vigorous productive upright large tender stalks, deep red inside and out. Leaves not edible. Native to Russia. Z3. (#1 crowns)

2482 MacDonald Rhubarb, bundle of 2, $8.00

Rhubarb
Plant the top of the root division level with the surface in well-prepared well-drained rich slightly acid soil (pH 5.5-6.5) and a bushel of well-rotted manure or compost under each crown. When plants are established, fertilize liberally with manure and balanced garden fertilizer or compost every spring, as is a heavy feeder. Harvest for four weeks two years after planting. Thereafter you can harvest for 8-10 weeks each year. Never remove more than 2/3 of the stalks from a plant.

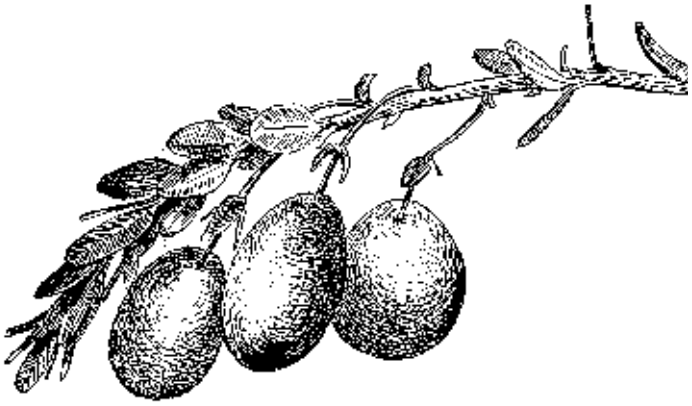
Every ten years or so, divide plants in early spring, leaving about 1/3 of the crown in place. Cut up the remainder into fist-sized pieces and replant.

Asparagus
Asparagus requires fertile soil with pH 6.8-7.2 and high levels of phosphorous. It doesn't like weeds. Plant 14-18" apart, 6-10" deep, in trenches 4' apart. Or dig your trenches somewhat deeper and fill the bottom with 4" of compost and rotted manure. Lay plants with crown up and cover with 2" of soil. As young shoots grow, add soil slowly just covering the shoots until the trench is full. In late fall, remove dead stalks and mulch with 3" of manure.

Second summer: Add lime as needed and dig in rock fertilizers and nitrogen fertilizer as needed. Control weeds but do not injure crowns.

Later years: Same routine but increase fertilizer. Be sure to leave some spears each year to grow stalks that will support the roots and give you more spears next year. Keep the bed weed free and mulched heavily.

New research shows that asparagus can be selectively harvested for 2 weeks during the second growing season, for 4 weeks in the third, and a full season thereafter. We recommend caution in harvesting any but the largest shoots from vigorous plants before the third or fourth season as the young plants need to establish themselves.



***Vaccinium macrocarpon* American Cranberry** This is the cranberry of delicious holiday sauces, bread and jelly. Dense low 2-12" lustrous evergreen ground cover, reddish purple in fall and loaded with 1/2" light yellow to orange to reddish-maroon berries that color more after harvest. Handpick or rake like blueberries before hard frost. Use fresh or freeze, or store in a cool basement or root cellar for months. Berries a well-known cystitis remedy. Requires acidic soil, Native to northeastern U.S. and Canada. 10 plants will fill a 5x5' bed. Z2. **ME Grown.** (well-rooted plants with 3-4 runners)

2496 American Cranberry, bundle of 10, $15.00

American Cranberries are shallow-rooted and require light acid soil (pH 4.0-5.5), preferably cool, moist and high in organic matter, similar to soils in which blueberries grow well, though will grow in dry locations. Often flooded for frost protection and convenience in commercial operations, but not necessary in home plots. Plant them in spring once the ground can be worked. They do well in a bed or in a naturalized setting. Instructions are for a 5 x 5' bed (10 plants).

For acidic "blueberry" soils: If you're fortunate to have a site where blueberries grow naturally, clear a spot of vegetation, cultivate the soil, add some peat and sand if you like, and you're ready to plant.

Sandy soils: Remove soil 10" deep and mix soil with 2 bales of damp peat moss. To acidify the soil, also mix in 1/4 lb sulfur. Replace mixture in bed and cover with 2" of sand.

Clay or silty soils: Remove soil 10" deep and place it around the edge of the bed as a berm. Replace the soil with 8" of moist peat moss (about 2 bales). Add 2" of sand and mix it slightly with the peat. To acidify the soil, also mix in 1/4 lb sulfur. Cover with an additional 2" of sand.

Plant cranberries 12" apart, so the roots are into the peat and the sand is covering the lower portion of the stems.

Remove all weeds as needed. Water the plants weekly so that the peat is moist but not saturated. Add nitrogen at a rate of 1/3-1 lb (or 20-50 pounds of manure) per 100 sq feet each year. No pesticides should be necessary.

Handpick berries before first hard frost when the berries are red.

In late fall cover the bed to protect the plants from the drying effect of winter winds. Use a mulch of leaves or pine needles; or cover with polyester row cover and then clear plastic; or cover with row cover and then plenty of leaves. If you use row cover or plastic, you may want to bait for mice under the plastic.

Remove mulch in early April. Protect flower buds from 28˚ frosts by covering with plastic during frosty nights.

Every two years partially cover the plants with a 1/2-1" layer of sand in spring before growth begins. This will help produce more berries and keep weeds down.

Fruiting Shrubs and Trees

These additional fruit-bearing trees and shrubs make beautiful hedges, attract birds and other wildlife, and many produce quite edible fruit as well. **Plant more than one of a kind to ensure pollination** for fruit production.

***Amelanchier alnifolia* Juneberry** 4-20' x 4-10' Also called **Western Serviceberry** or **Saskatoon Shadbush**. Attractive multistemmed tree or large shrub with large 1/3"-1/2" blueberry-like sweet purplish berries in July. Sweeter than blueberries. Fragrant white flowers bloom in early spring. Berries are good in pies or jams, fresh or dried. Used by native peoples in western prairies to make pemmican. Also popular with wildlife. Nice red-orange fall color. Prefers slightly acid soil, pH 5-7. Thrives as well along stream beds as it does on rocky slopes. Tolerates partial shade, salt, pollution and wet spots but not standing water. May get leaf diseases in warmer humid areas. Native to northwestern North America. Z2. **ME Grown.** (18-24" plants)

2555 Juneberry, $11.00

***A. a.* 'Martin' Juneberry** Seedling of Thiessen. Dieter Martin introduction, Martin Nursery, Langham, Saskatchewan, 1990. Large 3/4" fruit with excellent flavor. Blooms late. Can grow to 16' high. **ME Grown.** (18-24" plants)

2563 Martin Juneberry, $11.00

***A. a.* 'Regent' Juneberry** 4-6' J Candrian introduction, Regent, ND. Compact shrub form with excellent foliage and berry production. Beautiful fall color. Generally considered the best ornamental cultivar. (6-12" plants)

2570 Regent Juneberry, $11.00

***Cornus mas* Cornelian Cherry** 20-25' Large multistemmed shrub with oval to rounded form, or a small tree if you prune lower branches. Covered with small bright yellow flower clusters for 3 weeks in early spring, even before forsythia. Attractive long ovate leaves are shiny rich green. Bears profusions of dark red almost black 1/2-1" oblong cherry-like fruit from mid-late summer into fall; one tree can produce 30-70 lbs. a year. Fruit is sweet, tart and tasty, traditionally used fresh, dried, pickled, in tarts, jellies, syrups and drinks. Best for fresh eating when dark red, soft and beginning to shrivel. Fruits have twice as much vitamin C as oranges; folkloric use for skin disorders, joint pains and stomach upset. Flaky, exfoliating greyish to orange-brown bark. Extremely tough wood suitable for shafts, spokes and even bolts. Easy to grow, pest- and fungus-free and very long lived. Excellent as a hedge or specimen. Prefers well-drained soils but adapts to most soils, city conditions, even shade. Drought tolerant. Resistant to deer browsing. Fruit buds tend to escape early spring frosts although they can be injured in colder areas. Pest problems negligible. Self-pollinating, though pollination may improve with more trees. Native to eastern Europe and western Asia. Z4/5. (6-12" plants)

2640 Cornelian Cherry, $8.00

Hops

Refrigerate slightly moistened rhizomes in a plastic bag until planting. Hops prefer full sun and light-textured rich well-drained soil, with a pH of 6.5-8.0. As soon as soil can be worked in spring, till to create a weed-free area. Dig holes about one foot deep and at least three feet apart in rows. Add manure, compost and other slow-release organic fertilizers. Plant 2 rhizomes per hole, horizontally with the buds pointed up and cover with 1-2" of loose soil. The first year the hop plant requires frequent light watering and mulching.

Hops grow vertically, with lateral sidearms extending from the main vine and producing cones. Vines may grow up to 25' in a single season, and do best if they are trained onto strong twine 12-30' high, supported by a trellis, wire, pole, tree branch or south-facing building. When the young vines are about 1' long, select 2 or 3 most vigorous vines per hill and remove the rest. Gently wrap the vines clockwise onto a string. Once trained, the vine will guide itself.

Pick the hops when they are papery, but still slightly sticky, and filled with yellow powder. Harvest dates will vary with the variety and climate. Because most hops are produced out of reach from the ground, it is safest to lower the vines in order to pick the hops.

Cut the vines back to the ground after they have been killed by frost. Each spring apply a hearty dose of manure and compost as a top dressing. To help control hops' vigor, prune roots by cutting a 2-3' circle with a shovel around the base of the plant in spring.

***Humulus lupulus* Common Hop** Late summer. Up to 20-30' Not only for brewmeisters, although it has been used for brewing for over 1000 years. Beautiful twining vine dies back to the ground in fall and still covers a trellis or archway next growing season with green lobed leaves, bristly stems, insignificant greenish flowers, and the hops themselves: papery aromatic cone-like strobiles that are used in brewing and insomnia remedies. Europeans cook and eat young shoots like asparagus. For brewing, there are basically two types of hops. Aroma hops have lower alpha acids and are used as a finishing or conditioning hop. Bitter hops have higher alpha acids and are used to extract bitterness. Tolerates shade, adapted to most well-drained soils. Plant it where you want it because you may never get rid of it. No serious pests or diseases. Native to Eurasia. Z3. (5-6" female rhizomes)

Cascade Hops USDA 19124 (Fuggle x Serebrianka-Fuggle S) x open pollinated. Oregon St U, 1972. Fragrantly aromatic, used as an aroma hop for flavoring American light lagers. Cones feel buttery to the finger. Low bittering value. Resistant to downy mildew.

2670 Cascade Hops, 3 crowns for $9.00

Willamette Hops USDA 21003 x Fuggle Seedling 2-4, USDA, 1976. Excellent all-purpose hop. Old English-style aroma with brewing characteristics similar to Fuggle. Low bittering. Mild aroma. Good finishing hop for brewing English ales and stout. Vigorous. Higher yielding than Fuggle. Ripens midseason (late summer) and has good disease resistance.

2674 Willamette Hops, 3 crowns for $9.00

***Morus alba 'Tartatica'* Superchilly Mulberry** 30'x20' Super Chilly Farm, Palermo, ME, 1983. Selected from a number of small seedlings sent to me from the midwest many years ago. Purple-black sweet seedless blackberry-like fruit with little acidity. Delicious fresh or in sauces and pies. Long fruiting season beginning in mid-July in central Maine. Bears early, reliably and heavily. You may want to put down a sheet of some sort to collect the fruit as it falls. Or just graze regularly as I do. One of the last trees to leaf out in the spring and one of the first to set fruit. Dense, round-topped tree. Fast growing, even in poor soils, with no pest problems up here. Full sun to partial shade, withstands pollution, drought, wind and salt. What fruit you don't pick, the birds will. Plant it next to the chicken pen and where will "rain" chicken feed into the pen for several weeks every summer. May get set back by winter cold until established, but my 20-year-old tree has taken -25° with ease on many occasions. Native of northern China and Japan. Z4. **ME Grown.** (2-4' plants)

2688 Superchilly Mulberry, $16.00

***Prunus americana* American Plum** 15-20' Seedling plum that grows in thickets and produces very decent red yellow and orange 1" fruit, suitable for fresh eating, canning and freezing. Spectacular white bloom in spring. Plant singly as a graceful specimen or plant 2-3' apart and let the branches intertwine for maximum pollination. Red fall color. Will cross-pollinate with any of the hybrid plums (see items #**1683-1755**). Use as rootstock for hybrid and Japanese plums. Extremely hardy. Z3. (1/4"caliper)

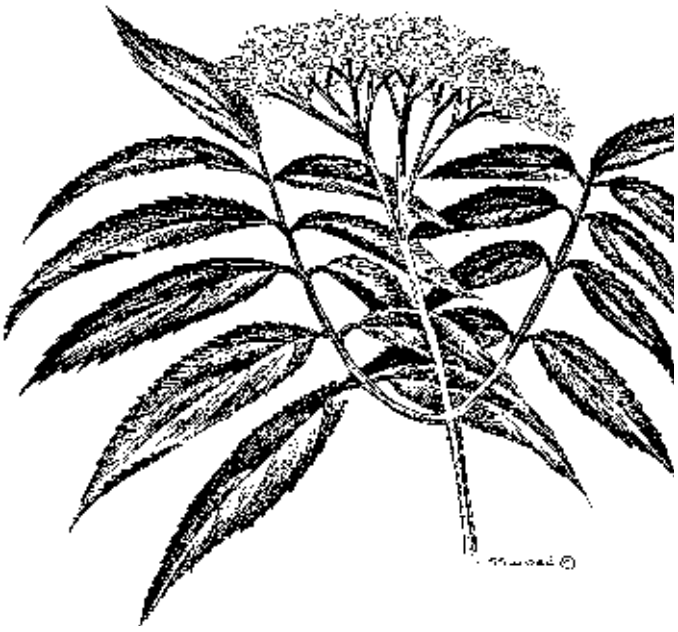
2707 American Plum, bundle of 10, $16.00

***P. maritima* Beach Plum** 6 x 5-6' Late summer. Rounded dense suckering shrub found along ocean beaches, New Brunswick to Carolinas. It's hard to miss the profusion of white flowers on Cape Cod in May of a good year. Purplish-red 1/2-1" fruit in late summer. Excellent jams, sauces, jellies. If you're a meat eater, nothing beats beach plum jelly with lamb. Does well in poor and sandy or heavy well-drained soils. Productive, reliable, salt tolerant. Plant about 6' apart, at least 2 for pollination. Native to eastern U.S. Z3. (12-18" plants)

2722 Beach Plum, $8.00

***P. tomentosa* Nanking Cherry** 6-10' Broad dense shrub, becoming open and attractively irregular. Pink buds open to fragrant white 3/4" flowers. Deeply veined light green foliage with very fine fuzz (tomentosa) lining each vein underneath. Very tasty but variable scarlet 1/2" fruit for pies and jams. Excellent hedge plant; prefers full sun in well-drained soil. This is an edible landscape crop that produces a lot of fruit that actually *is* edible! Covering plants with netting will deter birds from robbing your crop. Plant two or more for pollination. Native to China and Japan. Z2. **ME Grown.** (18-24" plants)

2725 Nanking Cherry, $8.00



***Sambucus canadensis* Elderberry, Sweet** or **Black-Berried Elder** 6-12' Broad vigorous multistemmed shrub with spreading branches and unkempt habit. Large flat creamy-white flower clusters (cymes) in early summer cover the shrub, make delicious fritters or a tea for colds and flu. Purple-black berries in late summer used in jelly or pie, famous for wine and attract many species of birds, beneficial insects, and other wildlife. Best grown in moist rich soil. Free from diseases and insects. Two varieties needed for pollination. Native to eastern U.S.

Adams No. 1 Selected by William Adams, Union Springs, NY, 1926. Vigorous strong productive bushes. Large berries and fruit clusters. Z4. (1-yr medium plants)

2760 Adams No. 1 Elderberry, $9.00

York Adams No. 2 x Ezyoff. NY Stn, 1964. Considered the largest-fruited and heaviest-bearing cultivar. Heavy clusters ripen after Adams. Bright green foliage on a large rounded shrub. Z3. **ME Grown.** (18-36" plants)

2780 York Elderberry, $9.00

***Viburnum trilobum* 'Wentworth' Highbush Cranberry** 8-12' Also known as **Crampbark**. Multistemmed shrub, good for screens and hedges, has clusters of white flowers in May. Pendulous clusters of brilliant red-orange berries hang September-February and are still edible off the bush in midwinter. Berries make jams and preserves, also are popular with dozens of bird species, especially waxwings. Flowers help attract and support beneficial insects. Bark used as anti-spasmodic; tea especially good for relieving moontime cramping. Maple-like leaves tinged red in the spring. 'Wentworth' was selected for edibility and large fruit size in the early l900s from a collection of 3000 viburnums. Bright lime-green leaves. Red fall foliage. Tolerates dry soils if high in organic matter, but prefers rich moist well-drained soils, sun or shade. Soil pH 6-7. Pollution tolerant. Susceptible to Viburnum Leaf Beetle; check with your local extension office or nursery to determine if this could be a problem. Not a bog cranberry (see #**2496**). Native from Canada to NY. Plant at least two for pollination. Z2. **ME Grown.** (12-18" plants)

2885 Wentworth Highbush Cranberry, $8.00

Conifers transplanted once in the nursery have a much higher success rate. These conifers are mostly three- to four-year-old transplants. 2-2TR means the plant is 4 years old: 2 years as a seedling and 2 years as a transplant. P+2 means one year as a plug and 2 years as a transplant.

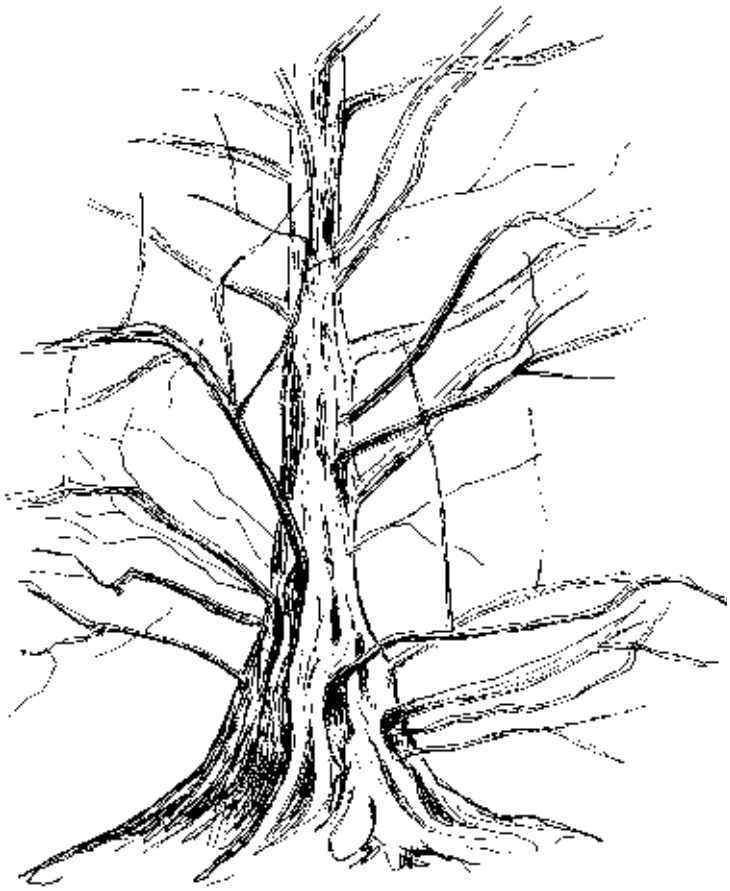
***Abies balsamea* Balsam Fir** 45-75' Often considered the "only real Christmas tree." Fragrant needles, a favorite for wreaths, pillows and potpourri. Small blisters (which are fun to "pop" at other people) on younger trees contain a transparent aromatic resin that native peoples used as an inhalant for headaches and congestion, and as a poultice for burns, cuts and arthritis. Narrow, conical, smooth-barked. Prefers well-drained moist acid soils. Avoid polluted areas. Semi-shade tolerant, slow-growing. Good specimen tree and songbird nesting area, and a favorite browse of moose and deer. The most abundant conifer in Maine, "country of the pointed firs." Native Labrador to PA. Z3. **ME Grown.** (3-2TR, 9-15")

2910 Balsam Fir, bundle of 5, $13.00

Conifers tolerate a wide range of soil conditions, but prefer a pH between 5.5-6.5. If you are planting in dry or well-drained areas, dip tree roots in Agri-gel (see other sidebar) solution before planting to protect roots from drying out. Do not use Agri-gel in heavy clay soils or wet areas. Do not soak conifers overnight; a good dipping is sufficient.

Before planting, prune off 1/3 of the roots. Dig a small hole or make an incision with a spade or planting bar and slip the tree in to the level it grew in the nursery. Fan the roots out; do not wind them around in the hole. It is much better to prune the roots than to crowd them in the hole. Water well and pack the earth down with your feet to remove air pockets. Young conifers need 3/4-1" of rain per week. Periodic deep waterings are far more beneficial than frequent sprinklings. No fertilization is necessary in the first year. In later years you may fertilize around the drip line.

To make evergreens dense and compact, remove leader and center bud on the end of each side branch.



***Metasequoia glyptostroboides* Dawn Redwood** 100' If you were going to plant only one ornamental tree from the Fedco catalog, this should probably be the one. The wide irregular trunk looks like something out of a fairy tale with its iridescent golden-orange bark that becomes deeply grooved, hollowed and fluted with age. The bright green deciduous needles turn orange in the fall. Grows quickly, up to 50' in 15-20 years, with many small-diameter horizontal branches and a uniform conical habit. Highly adaptable, easy to transplant. Prefers moist deep well-drained slightly acid soil in full sun. Will tolerate wet or dry sites. Pollution resistant; good specimen or street tree, rarely needs pruning. Fossils dating back 50 million years have been found in Japan. Thought to be extinct until it was rediscovered in central China in 1941. Resembles California redwoods only vaguely. Native of China and Japan. Z4. (1-2TR, 18-24")

3000 Dawn Redwood, $8.00

***Picea abies* Norway Spruce** 80' Fast-growing wide-spreading upright picturesque spruce with graceful long pendulous branches that often reach the ground. If you go to the Mt. Auburn Cemetery in Cambridge, MA, don't miss the ancient Norway Spruce just inside the front gate. Several of its massive drooping branches have themselves turned into secondary trunks. It is truly spectacular. Orange-brown scaly bark. Showy (marketable!) 4-6" cones, largest of the spruce. Bright green foliage. Prefers loam but does better than other spruces on poorer soils. Excellent lumber. Native to northern Europe. Z2. (2-2 TR, 9-18")

3040 Norway Spruce, bundle of 5, $13.00

***P. pungens glauca* 'Majestic' Colorado Blue Spruce** 30-60' Very popular specimen tree with truer blue foliage than other cultivars. Can be used as a screen; fast growing after 3'. Does not like wet soil. Extra spring nitrogen will improve blue color, which doesn't appear for first few years. Native to western U.S. Z2. (2-2 TR, 6-12")

3060 Colorado Blue Spruce, bundle of 5, $13.00

For a formal effect, use hedge shears and prune plants to desired shape.

***Pinus banksiana* Jack Pine** 35-40 'x same. Irregularly shrubby flat-topped picturesque spreading form. Yellow stems and short (1-2") grey-green needles, curved or slightly twisted in pairs and striped with white. The small cones won't open unless they're subjected to fire temperatures, and are said to be edible if parboiled to remove the resin. Suitable for windbreaks and hedges, but also quite beautiful in the garden. Will grow in sandy acid soils too poor for anything else. Incredibly rugged and hardy. Will survive almost anywhere. Medium-slow growing. Native northeastern North America. Z2. **ME Grown.** (3-yr transplant, 12-16")

3082 Jack Pine, $8.00

***P. resinosa* Red Pine** 50-80' Also known as **Norway Pine**. Probably called *Norway* Pine because the first specimens taken to England and planted in Kew Gardens were from Norway, Maine. Others speculate that Europeans first encountered this native tree in what became Norway, Maine. Perhaps both are true. Broad irregular or rounded crown of spreading branches. Long soft 3-8" needles. $1\frac{1}{2}$-$2\frac{1}{2}$" egg-shaped cones. Distinctive pinkish-silver scaly plated bark. Fast growing; thrives in poor soil, even sand. Some of the most beautiful specimens in central Maine are growing in a mixture of sand and gravel with apparently no organic matter at all. Relatively disease-free. Nearly became extinct during the last ice age, but is making a comeback. You can help! Native to northeastern U.S. and Canada. Z3. (P+2, 9-15")

3170 Red Pine, bundle of 5, $13.00

***P. strobus* Eastern White Pine** 100'+ The largest northeastern conifer. Magnificent and massive when mature. 200 years ago the white pines here in Palermo were typically 200' tall. You could stand a team of oxen on a stump! The current Maine champion, 132' tall, grows in Morrill and measures 6'9" in diameter. 2-5" blue-green needles and 3-10" cones. Smooth greyish-green bark becomes thick, rough and deeply furrowed with age. Medicinal teas are made from needles. The resin has numerous practical and medicinal uses. Excellent wood with a thousand uses. Planted thick and sheared, it makes a beautiful hedge which will not drop its lower branches with maturity. Grows fast and transplants well. Likes ordinary to poor—even sandy—soil. Shade tolerant, but does not like salt or roadsides. Do not plant within 300' of currants or gooseberries. Maine's state tree and Fedco Trees' logo. Native to eastern U.S. (P+2, 6-12")

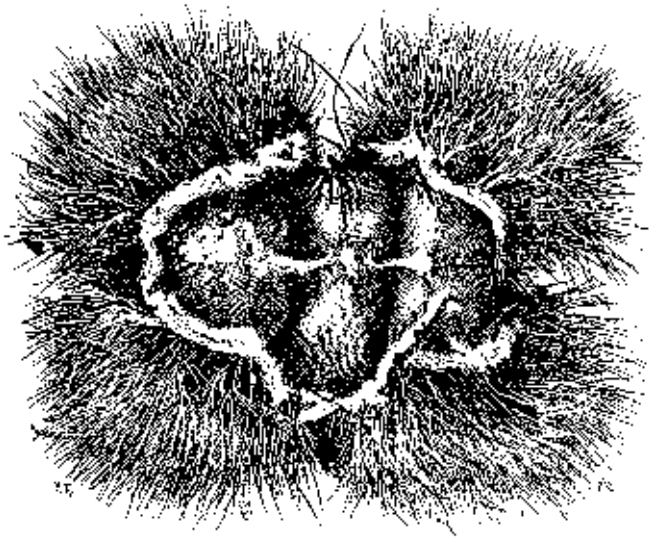
3180 Eastern White Pine, bundle of 5, $13.00

***Thuja occidentalis* Arborvitae** 20-60' Arborvitae means tree of life. Also called **Eastern White Cedar**. Narrow and tall with twiggy branches, soft orange-brown bark, and flat foliage unlike that of any other conifer. Foliage and bark tea high in vitamin C. Foliage tea helpful in infections, twig decoction makes an anti-viral anti-fungal skin wash. Valuable light fragrant wood, the standard for fence posts and log cabins in Maine. Slow-growing, lives up to 400 years. Thrives in rich moist marshy neutral-to-alkaline soils. Good for screens and hedges. Probably the first North American tree brought to Europe. Next time you're on Mount Desert, check out Thuja Gardens: beautiful cedars surrounding even more beautiful flower gardens. While you're there, visit Asticou Azalea Gardens, just down the road. Z2. (3-1TR, 6-12")

3230 American Arborvitae, bundle of 5, $13.00

Agri-gel A hydrogel formulation which absorbs and holds water. The swollen crystals adhere to plant roots, reducing transplant shock. Safe, non-toxic, easy to use. Useful for garden seedlings as well as woody plants. Highly recommended for raspberries and conifers. Half-ounce packet mixed with one to three gallons of water will treat up to 100 cane plants, or 50 trees and shrubs. $\frac{1}{2}$ oz.

7510 Agri-gel, $2.00



Nut Trees

Other than hazelnuts, nut trees should be planted 50' apart for nut production, 20' apart for lumber. **At least two trees of each species are required for pollination**.

***Castanea dentata* American Chestnut** Up to 100' Once again we're offering seedlings of pure American Chestnuts, from seeds collected in Maine by the Maine chapter of the American Chestnut Foundation. Before 1900, American Chestnut was the predominant and most important deciduous tree in the eastern U.S. The arrow-straight rot-resistant wood was used for everything from mine timbers to musical instruments. Heavy annual crops of delicious sweet nuts were an important food for wildlife and humans. When cut down, the trees quickly grew back from the stump. The Asian fungus *Endothia parasitica* (Chestnut Blight) was discovered in Brooklyn in 1904, and within 50 years it had killed virtually every chestnut tree in the eastern U.S. The blight does not kill the roots however, and rare isolated stands of mature trees can still be found. The trees we're offering are blight-susceptible, but will probably thrive if there is no active blight infection within a mile. Fast-growing and straight-trunked with a wide-branching magnificent rounded crown. Ribbed sharp-toothed dark lustrous green foliage. Yellow fall color. Fragrant white blooms in July. Prefers well-drained acid soil. Two or more needed for pollination, but will cross-pollinate with Asian and European chestnuts. Precocious, bearing heavy crops of nuts in 10 years. From each American Chestnut purchase, Fedco will donate $4 to support the work of the American Chestnut Foundation. Z4. **ME Grown.** (12-14" plants)

3400 American Chestnut, $16.00

***C. mollissima* Chinese Chestnut** 40-60' x same. Low-branching broadly rounded open form with large long narrow sharp-toothed shiny green leaves. It's a tree-climber's tree. Humorous catkins look like green fireworks sprouting from the branch tips. Decent-tasting prickly burr-encased edible nuts as early as 4 or 5 years after planting. Of the same genus as the beloved American Chestnut (*C. dentata*, above), but a quite different tree. Immune or at least highly resistant to the dreaded chestnut blight and used in breeding work to develop a blight-immune American Chestnut. Yellow fall color. Grooved grey bark. Prefers acid well-drained loamy soils. Native to eastern Asia. Z4. **ME Grown.** (2-4' plants)

3405 Chinese Chestnut, $10.00

***Juglans nigra* Black Walnut** 70-90' Magnificent open rounded crown of massive limbs with dark green leaves. Highly valued cabinet and veneer wood. Thick-shelled edible nuts have an intense distinctive flavor. Their husks yield a rich brown dye. Husks, leaves and roots are all anti-fungal. Deep taproot. Prefers moist, well-drained soils, pH 6-7. Roots give off a compound, juglone, which inhibits competing plants, so don't plant one too close to your garden. Bennett Verbeck grew this year's crop from seeds collected in Belfast. Native to eastern U.S. though not quite into Maine. Z4. **ME Grown.** (2-4' plants))

3455 Black Walnut, $10.00

***J. regia* English** or **Carpathian Walnut** 40-60' x same. Very large open somewhat vase-shaped tree with those edible nuts you buy in the store. Has the same alternate pinnately compound foliage as black walnut (above) but each glossy blue-green leaf is larger and more rounded, almost tropical looking. The branches are smooth medium-light grey, while the trunk and large limbs are accented with dark grey—almost black—grooves. Prefers light deep dry loamy soil. Doesn't like ledge or wet feet. Because our trees are seedlings, nut quality will be variable. Native to southeastern Europe and east to China. Z4-5. **ME Grown.** (2-4' plants)

3460 English Walnut, $10.00

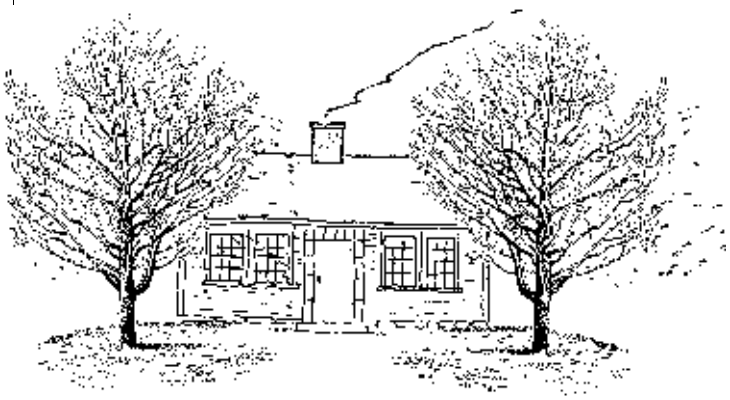
Shade Trees

One of my favorite places to see trees is the Mount Auburn Cemetery in Cambridge, MA. Over 200 acres, packed with hundreds of different species, it is truly spectacular. Most of the trees we offer have been growing there for generations. Maps are available showing where to find dozens of unusual specimens and the trees and shrubs are labeled. Next time you're near Boston, plan to spend at least a couple of hours there—better yet, half a day. You can drive right in and park practically anywhere.

Each year we offer a selection of our favorite shade trees. These larger trees release large quantities of water into the atmosphere through transpiration. They deflect the wind, attract earthworms, provide wildlife habitats, metabolize and reduce airborne pollutants. On blistering 90˚ summer days, it's clearly ten degrees cooler one step into the shade of the huge red oak in our yard: natural air conditioning. Other noteworthy features range from majestic beauty to herbal value to good wood for cabinets, fence posts and fires. Best of all, they provide shade!

***Acer rubrum* Red Maple** 50-60' Also known as **Swamp Maple**. While the Sugar Maple often has a bushier shape, the Red Maple usually has a central leader and a more upright growth habit. In early spring the dark red flowers cover the driveway long before any leaves appear. In the fall the foliage turns electric orange, yellow, brilliant red or maybe all three on one tree. The astounding combinations of colors surround me as I head off in my truck to go apple exploring every October. Excellent in the yard. Does not have the weak branching problems of Silver Maple. Sometimes tapped for sap in spring. Transplants easily. Prefers moist acid conditions but is adaptable to dry locations. Note that this is *not* the red-leaf maple *A. platanoides* 'Crimson King'. Native to eastern North America. Z3. (4-5' plants)

3625 Red Maple, $18.00

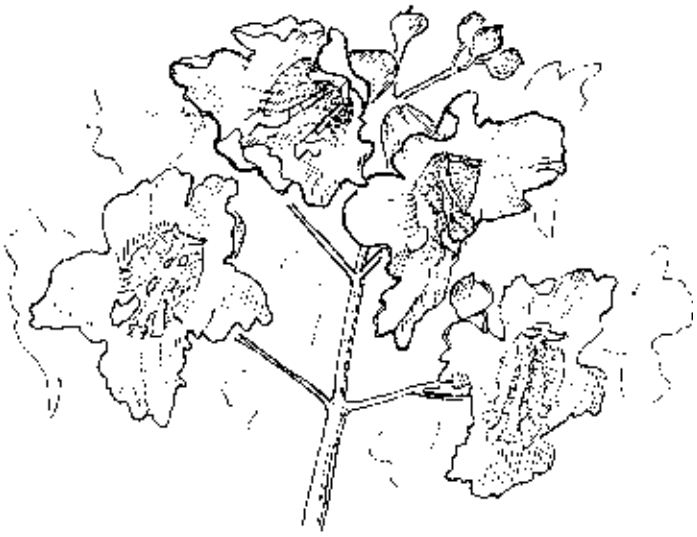


***A. saccharum* Sugar Maple** 50-100' Largest of our native maples, also known as **Rock Maple**, valued for shade, syrup, and lumber. Famous for its yellow gold scarlet and crimson fall foliage. Light grey bark. Fresh sap a spring treat. Very hardy. Shade tolerant, making it easy to interplant in existing woods. Prefers moist, well-drained soils. Huge upright spreading form. Traditionally a pair of Sugar Maples was often planted out in front of a farmhouse on the inhabitants' wedding day. Those "wedding trees" still grace many Maine front yards after all these years. Susceptible to salt and air pollution; not a good city tree. Native Quebec to Gulf Coast. Z3. **ME Grown.** (4-6' plants)

3630 Sugar Maple, $18.00

***Betula alleghaniensis* Yellow Birch** 60-75' x 40-50' Also called *B. lutea*. Although Yellow Birch can grow to be quite large, those growing here in my woods tend to be rather modest and irregular in form. They snuggle themselves into shady niches along the streams and seasonally wet spots wherever they can find a space. Somewhat rare and coveted in central Maine. Although lacking the popular white bark of the Paper Birch (*B. papyrifera*) this is nonetheless a magnificent tree. The deep golden-yellow shredding exfoliating bark glows and dazzles in the woods. Yellow fall color. I have hand planes made of its very hard dense high-quality wood. Makes beautiful flooring too if you can part with the stumpage. Like Sweet Birch (*B. lenta*) the twigs are a source of oil of wintergreen. Plant in moist or wet soil, acid or alkaline, but avoid standing water. They don't mind shade. Native to eastern North America. Z3. **ME Grown.** (3-5' plants)

3648 Yellow Birch, $8.50

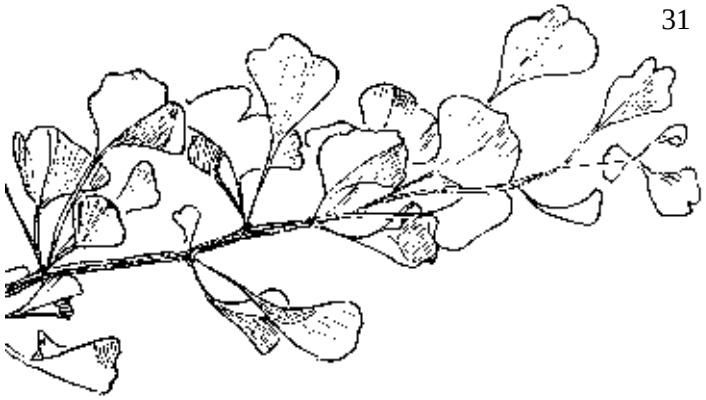


***Catalpa speciosa* Northern Catalpa** 40-60' Also known as **Western Catalpa**, **Elephant Ear Tree**, **Catawba** and **Cigar Tree**.If you can't afford an orchid for that special someone, plant a Catalpa and you'll be swimming in orchid-like flowers early every summer. With its form, its foliage and its flowers, this tree looks great on the street and great in the yard. Fast-growing coarse habit with a somewhat narrow open irregular crown and thick interesting undulant branches. Dense foliage of huge "elephant ear" heart-shaped leaves provides excellent shade. Covered in early summer with clusters of orchid-like ruffled incredibly fragrant jasmine-scented white blossoms each dotted with purple and spotted with rich buttery yellow radiating from the throat. Fruits are long bean-like "cigar" pods. Prefers deep moist fertile soil, but thrives in almost any conditions and soils, sun or partial shade. Grows rapidly. Remains dormant late into spring. Native to central U.S. Z4. (4-5' plants)

3670 Northern Catalpa, $12.00

***Fagus sylvatica 'Purpurea'* Purple Beech** 50-60' x 40-60' Also called **Copper Beech**. Discovered in the Hanleiter Forest near Sondershausen, Germany, before 1772. Purple-leafed form of the European Beech. A massive and incredibly magnificent tree that is widely planted in central and southern New England though not so common up this way. There are some absolutely breath-taking specimens in the Boston area. The coloring is awesome: deep purples and maroons, reds, and even orange, depending on the position of the sun. The rounded form reminds me of a gigantic gum drop or maybe a lady's old-fashioned hoop skirt. A thickly foliated curtain of branches hangs to the ground, forming a huge inner sanctuary. Looking up from inside the canopy, the undersides of the leaves are luminescent emerald green. It's unbelievable. Slow to medium-fast growing. Beautiful thick smooth grey bark—the kind that makes you want to start carving hearts, but please restrain yourself. Prefers moist well-drained acid soil. Native to Europe. Hardy in the warmer areas of Zone 4. **ME Grown.** (3-5' plants)

3705 Purple Beech, $24.00



***Ginkgo biloba* Ginkgo** 50-80' Also called **Maidenhair Tree**. Considered the oldest living genus of seed plants; grew in North America in the time of the dinosaurs. Upright when young with branches that spike out and up like the rays of the sun, eventually becoming wide-spreading and graceful. Slow-growing, can be extremely long-lived. Unique fine-cut fan-shaped foliage turns sparkling golden-yellow in fall, then all at once the leaves drop and within hours the tree is bare. Edible seeds, produced on female trees after 20-50 years, widely used in Asia. Leaves taken to enhance circulation to the brain and extremities. Tolerates smoke, dust, wind, ice, insects, disease, salt. Prefers moist sandy neutral soils but is very adaptable. Minimal maintenance requirements, an excellent city tree. Has anyone ever counted how many there are in Manhattan? There must be thousands. Peter Del Tredici, director of living collections at the Arnold Arboretum in Boston, noted in a lecture I attended last spring that there are 3000-year-old specimens in China. Male and female tree required for fruit. These are unsexed seedlings. Native to southeastern China. Z3. **ME Grown.** (3-4' plants)

3730 Ginkgo, $8.50

***Gymnocladus dioica* Kentucky Coffeetree** 50x50' Very attractive upright open-spreading form with deeply furrowed bark and stout branches. Attractive winter profile. Blue-green bipinnately compound foliage that hangs in perfect layers creating a beautiful patterned effect and nice light shade. Grass will grow right up to the trunk, making this an ideal lawn tree. Female trees have 12-18" fragrant greenish-white panicles; 3" panicles on the male. Attractive to bees. Females bear 3-8" seed pods whose seeds early European settlers roasted, ground and boiled to produce a coffee substitute. Apparently it's not that good. Grows fast when young, more slowly as the tree matures. Prefers deep moist soils but is adaptable to many conditions including alkaline soils, salt, cities, streets and drought. Disease-free. Requires full sun. These are unsexed seedlings. Native to the eastern U.S. Z3/4. (3-5' plants)

3737 Kentucky Coffetree, $18.00

***Koelreuteria paniculata* Goldenrain Tree** 30-40' x same. A graceful smaller upright spreading tree with undulating branches and exceptionally showy small bright yellow summer flowers borne in large 12" clusters. In bloom after most other trees and shrubs are done. Michael Dirr calls it "unrivaled for late yellow flowers." Attractive pods in the fall. Deep bluish-green compound foliage. The sparse branching creates a lacy shade suitable for a smaller lawn or even the street. Finely ridged and furrowed "pear-like" grey bark. Prefers full sun, but is extremely adaptable. Tolerates a wide range of soils and conditions including clay and alkaline soils, drought, heat, wind, air pollution and salt. You can plant it in the city or on the shore! Z4. Native to eastern Asia. (4-5' plants)

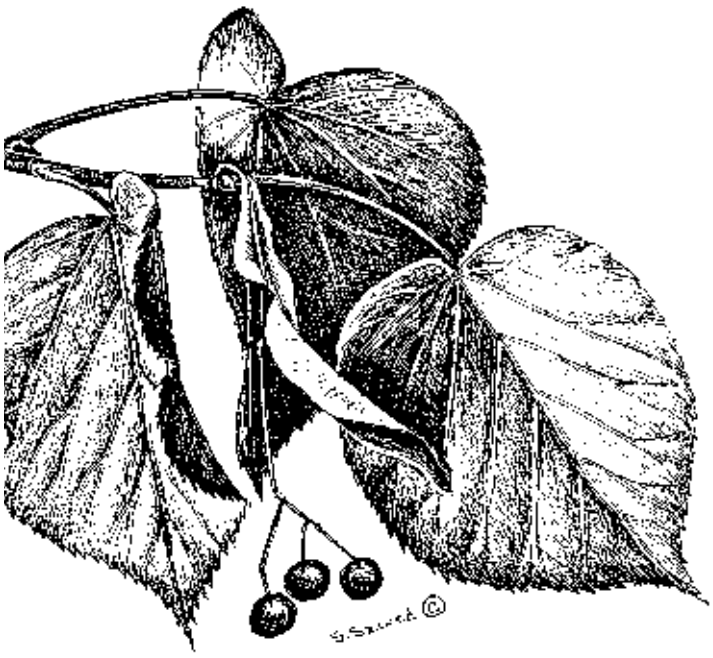
3748 Goldenrain Tree, $18.00

***Quercus alba* White Oak** 60-80' x same. Spectacular broad irregularly rounded oak dominates the landscape and has accumulated centuries of folklore. The lowest branches sometimes stretch out horizontally as far as 50' from the trunk. One of the most beautiful specimens I know is in Bedford, NY. "The Bedford Oak. Dates back to the 15th century" is carved into a rock near the tree. Stop and see it if you can; it's just a few miles off 684. There are some extremely fine specimens in Maine, too, on Swan Island in the Kennebec River right off Richmond. Peeling light grey papery bark is distinctive on mature trees. Bark tea makes an effective astringent. Wood is valued for lumber and firewood. Edible acorns attract a diversity of wildlife. Once common along the Maine coast, it was almost entirely stripped for boat building lumber over a century ago. Soil adaptable though it prefers deep moist well-drained acid conditions. Thrives in locations with minimal soil compaction where leaves can be left at base. Disease- and insect-resistant, drought tolerant. Slow growing. Extremely long-lived. Native to eastern U.S. Z3. **ME Grown.** (8-12" well-rooted 4-yr-old plants)

3785 White Oak, $12.00

***Q. macrocarpa* Bur Oak** 70-80' x same. Hardiest of the white oaks with a furrowed and massive trunk and a wide-spreading crown of huge branches. The trunk is the most imposing of all our northern oaks and the bark is the most deeply grooved. This is a spectacular tree. The habit is somewhat more upright vase-shaped than *Q. alba* (White Oak). Lustrous dark green foliage 4-12" in length. Small branches distinctively corky, winged, and tend to twist and kink. Large 1-2" acorns almost entirely enclosed in a fringed cup; edible, low in tannic acid. Acorn flour was a staple food of native people for thousands of years. Roasted acorns make a decent coffee drink. The bark is astringent and antiseptic. Needs full sun; tolerates clay soils, dry to moist, acid to alkaline. The most urban-tolerant oak. Pyramidal in youth. Fairly fast growing. Native of eastern U.S. and Canada. Z2. (2-4' plants)

3791 Bur Oak, $16.00



***Q. palustris* Pin Oak** 60-90' x 70-100' Also called **Swamp Oak**. Young trees have a distinctive pyramidal habit maturing to a spectacular large rounded form. Unique among oaks for its long spreading horizontal branches, the lower ones angling towards the ground. Though the name most likely comes from its branches being thickly covered with short pin-like twigs, it also has a perfectly upright straight pin-like trunk akin to a missile on the launch pad. The deeply incised shiny green leaves with pointed lobes are unmistakable. Leaves turn reddish to brown in the fall and acorns are a little smaller and rounder than the red oak's. Although not native to Maine, it is fairly common around the state. Some of the best specimens can be found in Portland's parks, including, of course, Deering Oaks. Lacks a tap root so transplants readily, preferring moist well-drained acid soils. Tolerates urban conditions. Native southern New England to Arkansas. Z4. **ME Grown.** (3-5' plants)

3794 Pin Oak, $16.00

***Q. rubra* Red Oak** 60-80' Also called **Northern Red Oak**. After careful study of the major oaks in the Northeast, I'd like to offer the following scientific observations: the Pin Oak (*Q. palustris*) is ready to *leave* the earth, the ethereal White Oak (*Q. alba*) has already left, the granitic Black Oak (*Q. nigra*) is turning to stone, the Bur Oak (*Q. macrocarpa*) is plunging *into* the earth, and the Red Oak (*Q. rubra*) is the most *connected* to the earth. Next time you see them all in one place, let me know if you agree. There's something about how that massive trunk fans out perfectly to join the ground: the essence of connectedness. While its branches are not as massive as some of the other oaks, its fan-shaped rounded crown is magnificently impressive. The trunk itself is a deep gray textured web of surfaces overlaid upon one another. This is a beautiful tree. Fast growing, up to two feet per year. Prefers well-drained sandy loam, slightly acid soils. Will tolerate shade, compacted soil, salt, pollution and other urban conditions. The acorns love my gardens and I seem to cultivate a new crop of seedlings effortlessly every year. Disease and insect tolerant. Eastern U.S. Z4. **ME Grown.** (1 1/2-5' plants)

3797 Red Oak, $12.00

***Salix* spp. 'Cape Rosier' Basket Willow** 50' more or less. If you're looking to make a basket, a bowl or maybe a boat this could be the only material you need. Beautiful subtly golden-colored basket willow propagated from the Old Nearing Homestead on Cape Rosier, ME. The trees have been pollarded for many years, a European pruning technique that enhances the formation of long whips for basket-making, enables easy annual spring harvesting and controls the size of the tree. In time, the trees develop a gnarly head which has great character. Stanley Joseph, homesteader on Cape Rosier and neighbor of the Nearings, used this willow for many years to make everything from baskets to boats (the Irish coracle). It was with Stanley's encouragement many years ago that I first planted basket willows at home in Palermo. Prefers sun and moist soils. Z4. **ME Grown.** (3 1/2-6' plants)

3832 Cape Rosier Willow, $12.00

***S. alba* 'Tristis' Niobe Weeping Willow** 50x50' The classic weeping willow, a very large majestic and extremely graceful wide-spreading tree. Golden drooping branches can hang to the ground. Branches used for basket weaving; golden bark and leaves used medicinally. Not to be confused with the Whomping Willow of Hogwarts fame—branches sway freely in the breeze but are unlikely to attack, though roots have been known to disrupt plumbing. Easily transplanted and fast growing. Prefers sun and moist soils. Native to southern Europe and western Asia. Z4. **ME Grown.** (3-6' plants)

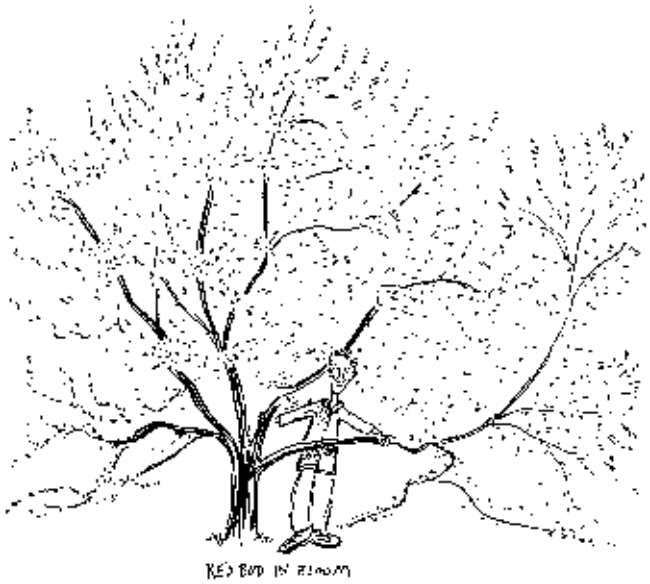
3833 Niobe Weeping Willow, $8.00

***Tilia americana* American Linden** 60-80' Also known as **Basswood**. Tall stately tree with rounded crown and numerous low-hung spreading branches. Good tree for attracting bees no matter how remote the location. Sweetly fragrant yellow June flowers reputed to make the best honey, also a popular after-dinner tea and stomach remedy. I consider it the best soft carving wood. Inner bark, tough and fibrous, for ropes and nets. Young fruit and flowers ground into a paste as a chocolate substitute. Yellow fall color. Likes deep rich moist soils, but will grow in dry heavier soils. Full sun or partial shade. Sensitive to salt and pollution. Tolerates alkaline soil. Subject to Japanese beetles and other insect damage, though control measures are seldom needed. May live to 900 years. Native New Brunswick to Virginia. Z3. (2-5' plants)

3850 American Linden, $12.00

Ornamental Trees

Although some of these smaller trees are certainly large enough to provide shade and others may provide excellent wildlife food and cover, their chief attribute tends to be their beauty. Some have spectacular blooms while others have amazing foliage, fragrance, bark, branch structure or overall appearance. All deserve to be planted more often than they are.

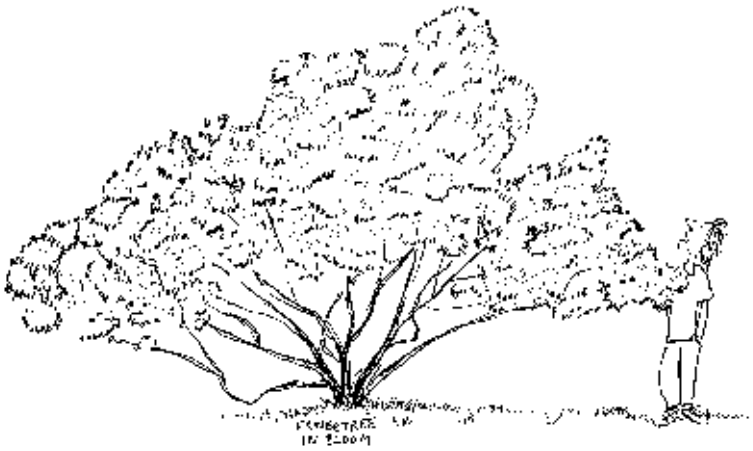


Cercis canadensis **Redbud** 25-30' While visiting friends in central Masssachusetts last spring I had the good fortune to check out their 55-year-old redbud. At first glance it looked almost like an apple tree growing there beside the deck, but the bark on its 12" trunk with amazing pink undertones looked like nothing I'd ever seen before. Even more amazing is the small irregularly vase-shaped tree in bloom. Clusters of brilliant purplish-pink pea-sized flowers in early spring are so abundant it seems that any place there could possibly be a flower there is one. They even dot the graceful branches themselves and come right out of the trunk. It's an astonishing sight. Large heart-shaped leaves, up to 7", emerge a beautiful opaque pink, gradually mature to deep green and give bright yellow fall color. 2-3" flat leguminous pods. Excellent honey plant. Sun or partial shade. Fine as a specimen tree or in groups. Needs sweating before planting to break dormancy; see instructions on p. 5. Native to central and eastern U.S. Z4. (4-5' plants)

3907 Redbud, $18.00

Chionanthus virginicus **White Fringetree** 15-30' x 30' Michael Dirr, in his definitive *Manual of Woody Landscape Plants*, suggests that fringetree should be our national shrub. I agree. Large multistemmed shrub or small tree with an open spreading rounded form. So completely covered with lightly fragrant clouds of feathery lacey white flower-clusters in spring that you can hardy see the beautiful glossy rich dark green foliage when it's in bloom. From a distance, it looks like a tree with a poof. Spectacular as a specimen, in groups, borders, near buldings. Small bluish-black fruit sought by birds. Adaptable, but prefers moist fertile acid soil. Tolerates air pollution; does well in cities. Native of eastern U.S. Z3. (16-30" plants)

3910 Fringetree, $14.00

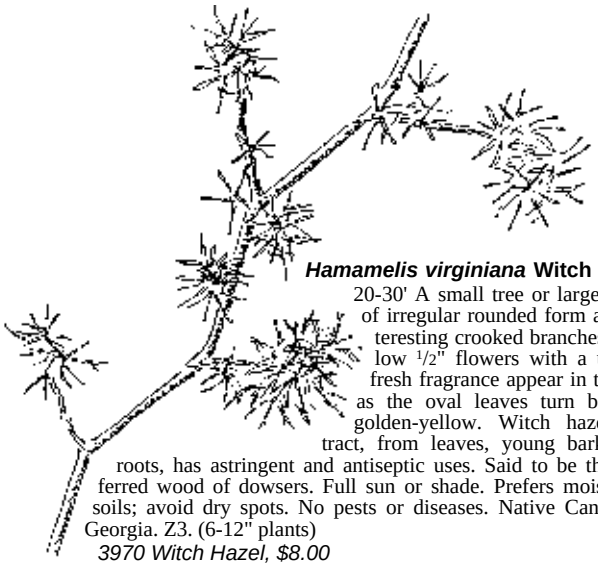


Cornus alternifolia **Pagoda Dogwood** 20' x 30-35' Also known as **Alternate-Leaved Dogwood**. Small tree or large multistemmed shrub, particularly beautiful for its tiers of horizontal branches and their distinct sympodial (consecutive "Y's") branching habit right down to the smallest twigs. Extremely fragrant white 2-3" flower clusters in mid-late spring, followed by immature olive-green berries, each tipped with a tiny bright yellow style remnant. In midsummer clusters of dark blue berries ripen above the blue-green foliage. One of the most popular dogwoods with the birds. Prefers partial shade and moist well-drained acid soil, but tolerates full sun, poor soil and even clay. pH adaptable. Excellent naturalized as a specimen or in groups and often found growing with sugar maple, beech and basswood. Reddish-purple fall color. Native to eastern U.S. Z3. **ME Grown.** (large well-rooted plants)

3920 Pagoda Dogwood, $8.00

***Crataegus phaenopyrum* Washington Hawthorn** 25' Widely recommended as one of the best hawthorns. Rounded oval form with a fragrant white showy bloom in late spring and reddish-purple foliage which turns lustrous green with maturity. Sets 1/4" glossy red-orange berries that persist all winter or can be harvested in October and dried for herbal use. Orange, red and pink fall color. Excellent as a specimen, in groups, on streets, in borders. 2" thorns and shrubby habit make an impenetrable hedge while protecting nesting birds tucked within. Incredibly tough wood will dull any axe and makes the hottest fire. Prefers sun but tolerates shade. Well-drained moist or dry soils, will handle alkaline conditions, exhaust, pollution and drought. Disease-free and impossible to stress. Eastern U.S. native. Requires "sweating" to break dormancy; see instructions on p. 5. Z3-4. **ME Grown.** (16-24" plants)

3949 Washington Hawthorne, $9.00



***Hamamelis virginiana* Witch Hazel** 20-30' A small tree or large shrub of irregular rounded form and interesting crooked branches. Yellow 1/2" flowers with a unique fresh fragrance appear in the fall as the oval leaves turn brilliant golden-yellow. Witch hazel extract, from leaves, young bark and roots, has astringent and antiseptic uses. Said to be the preferred wood of dowsers. Full sun or shade. Prefers moist acid soils; avoid dry spots. No pests or diseases. Native Canada to Georgia. Z3. (6-12" plants)

3970 Witch Hazel, $8.00

4020-4176 ***Malus* Crabapples** on pages 34-35.

***Sorbus decora* Showy Mountain Ash** 20-25' Also known as **Northern Mountain Ash**. Small tree with a spreading rounded crown and classic Mountain Ash leaf shape; each of the pinnately compound leaves has about a dozen blue-green long narrow toothed leaflets, somewhat whitened on the underside. Showy bright white umbel-like blossoms in spring, large bright red berries, yellow-red fall color. Oddly enough, you can graft pears onto Mountain Ash. Definitely a way to surprise your neighbors. Prefers moist soils. Hardiest of the Mountain Ash. Native of northeast U.S. and Canada. Z2. (2-4' plants)

4207 Showy Mountain Ash, $16.00

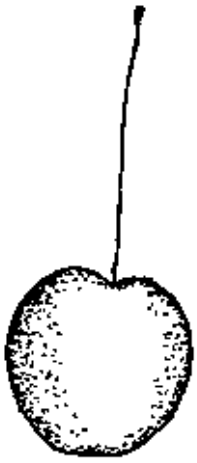
***Syringa reticulata* Japanese Tree Lilac** 20-30' x 15-25' What a treat to sit beneath a blooming Tree Lilac in early summer with fragrant petals dropping all around me as the bumble bees work the last snow-white blossoms. Large lacy triangular creamy-white panicles—each made up of countless tiny 4-petaled flowers—perch above the canopy of dark green foliage. Their wonderful fragrance is reminiscent of almond extract. Reddish brown cherry-like bark is grooved and checked. The tree itself has a rounded irregular habit. Strip off lower buds to ensure tree form. Full sun to partial shade and well-drained soil, with a pH of 6.5-8. Resistant to lilac borers and powdery mildew. Beautiful as a specimen or in groups. Salt- and drought-tolerant. Native of Japan. Z3. (2-5' plants) See #**4790-4868** for other lilacs.

4212 Japanese Tree Lilac, $9.00

***Malus* Flowering Crabapples** In the last few years I have grown to appreciate this incredible tree. Actually I should say, this *group* of trees, for the common definition of crabapple is *tree of the genus Malus with fruit under 2" in diameter.* This includes North American and Asian species, and countless crosses. Crabapples are almost infinitely varied in their size and form, their flowers, fragrance, fruit, and even their foliage. They vary from culinary to fruitless to wildlife varieties, from huge trees suited to parks to tiny trees for the patio; from rounded to upright, vase-shaped to wide-spreading to weeping; from lime green to deep red foliage; from brilliant white to pink to orange to red blooms. Give some thought to the space you intend to fill—the perfect selection will look great all year round.

I'm fortunate to have spent a great deal of time checking out specimens at a number of locations, my favorite being the Lyle Littlefield Garden on the University of Maine campus in Orono. This year's selections represent a cross section of current favorites including six not offered elsewhere. We'll be offering many more in coming years.

Most bloom annually in May just prior to the lilacs and make excellent pollinators for any apple. (3 1/2-6' trees)



Baskatong Simcoe x Meach. Isabella Preston introduction, Canadian Dept of Ag, Central Experiment Stn, Ottawa, Canada, 1950. 25' x 30' I first learned about Baskatong from John Sabuco's *Best of the Hardiest,* in which he calls it tied "for the #2 position on my all-time-favorite list [of crabs]." Seeing it myself was one of the highlights of my 2002 trip to the Minnesota Landscape Arboretum. Upright and wide spreading, arching and nearly weeping in form. Quite the combination. Not a small tree. Foliage opens purple and then mellows to a deep bronzy green with red veins and purple stems. Purple buds and light purplish-red-pink flowers with a white claw on each petal. Rusty opaque brick red somewhat russeted 1" persistent fruit has dark red flesh. I haven't heard reports on its jelly qualities, but it does have decent size and color. Excellent disease resistance. Fedco exclusive. Z3. **ME Grown.**

4020 Baskatong, $16.00

Brandywine *M. ioensis* 'Plena' Klehm's No. 8 (*M.* x *purpurea* 'Lemoinei' x *M.* 'Klehm's Improved'). 20x20' A magnificent loosely rounded disease-resistant tree. Deep red buds followed by small deep pink double rose-like blossoms. They're amazing. Put an arrangement of the flowers in a vase, and people will think they really are roses. Like one of its parents, Klehm's Improved Bechtel, Brandywine is one of *the* most fragrant of all crabs. Cars will pull over to the side of the road if your tree is near the street. Large green leaves with a red cast in spring. Its one drawback is that the large 1" yellow fruits drop early and are of no culinary value. Blooms late, after most other crabs. Z4. **ME Grown.**

4026 Brandywine, $16.00

Donald Wyman Chance seedling. Arnold Arboretum, 1970. 20x30' Deep pink buds and large 2" single white flowers early in the season. The bloom is so intense, the tree looks like one massive flower. Beautiful somewhat dense rounded and wide-spreading medium-sized tree with attractive glossy green foliage. Looks great when it has room to spread out. The shape alone is enough to recommend this cultivar. You can always spot a Donald Wyman in winter by its mass of very small bright red fruits which the birds keep in reserve until spring. 2001 winner of the Carey Award for Distinctive Plants for New England. Named in honor of America's great horticulturist. Largely disease-free, but said to be slightly susceptible to powdery mildew. Z4. **ME Grown.**

4051 Donald Wyman, $16.00

Liset (*M.* x *purpurea* 'Lemoinei' x *M. siebodii*) The Hague, Netherlands, 1938. 15x20' Bright crimson-red buds followed by single red-orange flowers, often considered the brightest and most red of any crab. Although not well-known, Liset shows up on every "Best Crabs" list. Once you see it, it's hard not to agree. This medium-sized tree has perfect open spreading horizontal form: not too open, not too dense, not too large but not too shrimpy. Dark red, 3/4" round fruit. Purple branches, deep green foliage with a purple hue, young foliage the color of beet leaves. I grew beets around the base of my 'Liset' one year and the juxtaposition was quite wonderful. Virtually scab-immune and disease free. Z4. **ME Grown.**

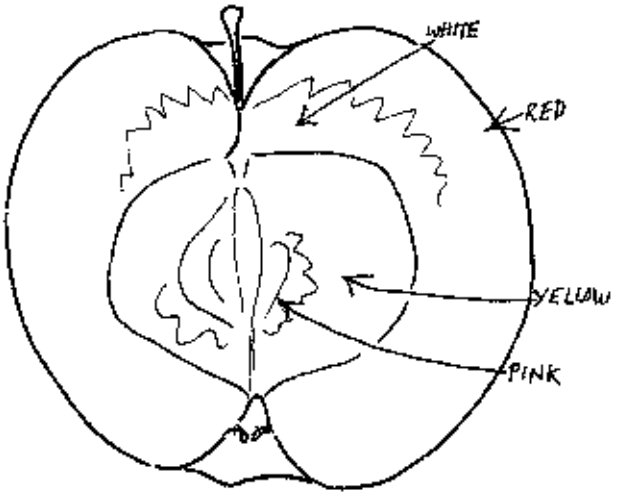
4091 Liset, $16.00

Lyle Littlefield *M. baccata* Seedling of Siberian Crab, selected and planted at the Lyle Littlefield Gardens in Orono, ME. 20' x 48' A very large crab with a massive bloom of 1 1/2" pure white single flowers. Plant this tree where you want to fill a large space . The specimen in Orono has four large undulating curving trunks. It's a tree climbers' dream. In fact, as you walk up to it, it seems to say, "Climb me!" The spreading branches hang 2-3' from the grass, and there are no less than five perfect spots to hang a swing on this one tree. A magnificent tree all year round. Fedco exclusive. Z3. **ME Grown.**

4095 Lyle Littlefield, $16.00

Marshall Oyama Introduced to the U.S. from Japan by Boyce Thompson Arboretum, Superior, AZ, 1930. 20' x 30' Pink buds and abundant wonderfully fragrant slightly cupped 1 1/2" single white flowers with delicate yellow anthers. 1" yellow and red fruit make an excellent jelly. Medium-sized tree with an open upright spreading form. The basic framework is vase-shaped but as the tree matures the branches spread and then arch downward. The tree is quite vigorous but open. You can easily see through it. Free of scab and fire blight. Fedco exclusive. Z3. **ME Grown.**

4098 Marshall Oyama, $16.00



Redfield Fall. Wolf River x Niedzwetzkyana. NY Stn, 1938. Pink blooms, bronze foliage and red flesh. Cutting open a Redfield apple always causes a stir: inside is two-toned, deep pink fading to white around the core. Single two-toned flowers are deep pink, tipped with small white lightening bolts, and contrast nicely with the bronze-red foliage which adds interest all season. Although often considered too tart for eating out of hand, the 2 1/2" opaque solid rusty red fruit is excellent in sauce, pies, and salads. It also makes killer jelly and turns cider and sauce red. In 1897 Niels E Hansen, the plant explorer and breeder, was introduced to a red-fleshed red-leafed apple in Turkestan by Mr. Niedzwetzky. The apple Hansen named Niedzwetzkyana has had a major effect on crabapple breeding ever since. In 1924, Richard Wellington crossed the apple with Wolf River and named the result Redfield. One of the very first to bloom each year. Fedco exclusive. Z4. **ME Grown.**

4135 Redfield, $16.00

Red Jade (Chance seedling of *M. floribunda* 'Exzellenz Thiel') Brooklyn Botanic Garden, NY, 1953. 12-15' x 15-20' One of the finest of all weeping crabs. The spring combination of yellow-green foliage, pink buds and single white (actually faint pink) blossoms has a magical, almost surreal quality. Changing every day as more buds open and the greens and pinks merge and soften to white. Never garish in any way. Magnificent dense fine-branched weeper so perfectly formed that you could set up table and chairs under the umbrella-shaped tree and be protected from wind, sun or rain. Branches will drape all the way to the ground. Bright red 1/2" persistent fruit, popular with birds. Glossy vibrant green foliage. We recommend training it to begin weeping at about 6-8 ft. Z4. **ME Grown.**

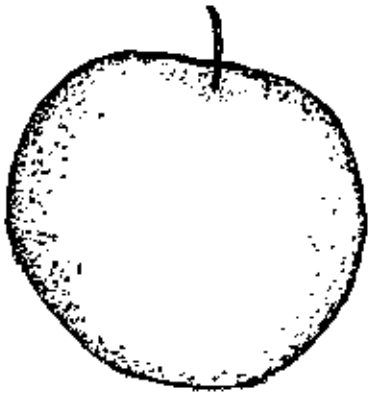
4136 Red Jade, $18.00

Crabapples are really just apples in disguise. They prefer full sun and deep well-drained soils of 5.5-6.5 pH but they are quite forgiving and will thrive in many locations with a little TLC. They don't like to be drowned or starved for water, and they do need to be protected from borers, mice and deer. See pp. 6-7. For planting instructions, see p. 5.

Pruning Crabapples

Most crabapples require little or no pruning except when a branch is broken or you feel compelled to shape your tree in one way or another. Allow each tree to assume its own unique form. Weeping crabs however do require pruning and training.

Sweet Crab Originated in central Maine, probably near Augusta. 20x30' Sweetly fragrant pink blooms followed by large—nearly 2"—edible yellow fruit with a red blush. Good for fresh eating, makes a sweet reddish jelly and a wonderful sauce. Small red ruby-like buds open to rosy pink 5-petaled "cups" which fade to soft rich pink as they unfurl. As the pink fades, a hint of blue is revealed and the spent flowers take on a light purple hue. Very nice. Even this past cold spring it was one of the first to bloom. Bright yellow-green foliage. Len Alexander, who has been farming and fruit exploring in Chelsea since long before I was born, introduced it to me. Long lived. Fedco exclusive. Z4. **ME Grown.**



4164 Sweet Crab, $16.00

White Cloud Unreleased unnamed seedling, Lyle Littlefield Garden, Orono, Maine. On one of my annual trips to the Lyle Littlefield Garden Brad Libby, the Garden's current director, pointed out this seedling as a personal favorite. I can see why. Forms a white cloud of blooms every year, visible from across the arboretum. I thought White Cloud might be an appropriate name, or maybe it was Brad who suggested it. I can't remember! The color is unique. The buds begin as light pink, then just before opening they fade to a soft yellow and then open white. The effect is astonishing—soft green, white and yellow. Single blooms. Yellow-green foliage. Upright form with semi-weeping branches. Not a big tree. Fedco exclusive. Z3. **ME Grown.**

4176 White Cloud, $16.00

Training Your Weeping Crab

First summer: Stake the tree and do not prune it at all. Staking keeps the the tree from weeping before reaching the desired height. Tie the tip (central leader) snug to the stake.

Second summer: Decide at what height you want weeping to begin. Continue to train the leader to the stake until it reaches the desired height. Leave some but not all the lower branches.

Later years: Once the leader reaches the height to begin weeping, let several branches form and begin to weep. (The nicest weepers I've seen begin weeping at about 6-8' high.) Over 2-3 years, remove all the lower branches. Eventually remove the stake. Continue to remove lower branches as necessary.

Woody Ornamental Shrubs

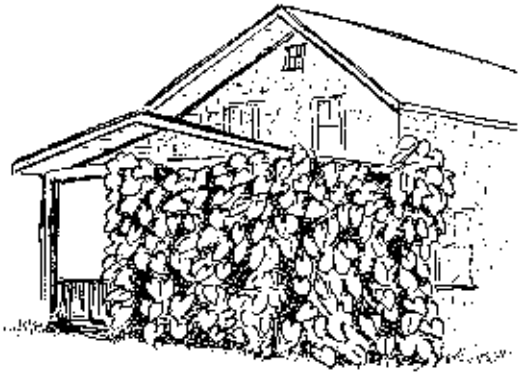
Although many of these shrubs are multi-use plants, all are cultivated primarily for their flowers, fragrance, foliage or interesting form. They range from diminutive and delicate to large and breathtaking. Some are old standards and some are relatively unknown. We plant them to reduce the amount of lawn we feel compelled to mow, while increasing the beauty and wildlife cover that surrounds us. It's great to see that lawn shrinking a bit more every year!

***Abeliophyllum distichum* White Forsythia** 4x4' A more reliable bloomer in the North than true forsythia. Vigorous multistemmed informal rounded shrub with clusters of white spicy-scented forsythia-like flowers in very early spring. Makes a good companion for true forsythia. Prefers sunny well-drained locations, but will tolerate most soils. Cut back to 6-12" every 3-4 years. Native to Korea. Z4. (6-12" plants)

4225 White Forsythia, $7.00

***Aesculus parviflora* Bottlebrush Buckeye** 10-12' x 15' Irregular large wide multistemmed suckering shrub with beautiful horse chestnut-like foliage and jaw-dropping midsummer flowers. Forms absolutely magnificent multi-level colonies. The medium to dark green foliage turns yellow-green in fall and is always disease-free. In early summer green asparagus-like spears appear across the surface of the colony and then open up into spectacular 10-18" plume-like feathery panicles that stand upright above the foliage in a mass. It is a major show-stopper in and out of bloom. You can grow it in the sun but it will thrive in the shade. Prefers well-drained acid soil. Native to SE North America. Z4. (large well-rooted transplants)

4227 Bottlebrush Buckeye, $14.00



***Aristolochia durior* Dutchman's Pipe** 20-30' Also called **Pipe Vine**, a vigorous climber with large 4-10" heart-shaped dark green leaves. Can cover screened porch or trellis in 2-3 seasons. Sun or shade, thrives in shade. Likes well-drained soil with adequate moisture. Inconspicuous U-shaped tubular flowers in clusters of 1-3 with white base, mahogany lobes which look like a "Dutchman's Pipe." Native to eastern U.S. Z4. (2-yr #1 vines)

4235 Dutchman's Pipe, $11.00

***Aronia arbutifolia* 'Brilliantissima' Red Chokeberry** 6-10' x 3-5' In his book *Best of the Hardiest*, John Sabuco calls Red Chokeberry "one of our finest native landscape shrubs." Upright multistemmed form. Dense clusters of small but showy white flowers with red stamens. Dark green foliage turns spectacular crimson in the fall. Abundant persistent glossy bright red fruit birds will love. Spreads by suckers. Beautiful in masses, plantings and borders. Transplants easily. Adapted to many soils, wet or dry, but prefers moist and well-drained. Sun or partial shade. Can be trained into a small tree. Native eastern U.S. Z4. (6-12" plants)

4240 Red Chokeberry, $8.00

Pruning Directions for Ornamental Shrubs, Trees and Berries

The success, satisfaction and beauty you obtain from your flowering shrubs and trees is dependent upon proper pruning. Trim shrubs for large blooms, finest foliage and best form.

Why Pruning Is Necessary

1. Most shrubs need a few of the older canes cut off at the ground line each year to encourage the growth of new young canes. This is a natural rejuvenation procedure of old canes with new.
2. Larger and better blooms are obtained with pruning as the vitality of the plant goes to the blossoms, rather than supporting heavy wood growth.
3. The natural shape of the shrub is retained by removing the poorly shaped longer branches.
4. Health, neatness and vigor are retained by removing broken, dead or diseased branches.
5. Shrubs with unusual bark coloring should have the older canes removed, as the full natural coloring is obtained only in the young new growth.
6. Certain varieties of shrubs sucker from the roots. These suckers should be removed.

Pruning shrubs is primarily thinning out older undesirable canes. Varieties such as hydrangeas, altheas, tea roses, tamarix and dogwoods should have all canes pruned back to produce larger flowers or more brightly colored canes.

The nature of growth of a tree may be controlled by pruning. If you desire a tall tree with a high crown, prune the lateral branches from the trunk and prevent formation of low crotches. For a low, stocky tree used in screens and windbreaks, cut back the top shoots to force side growth.

Remove oldest wood and center branches (a few each year).

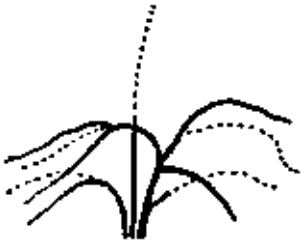
Prune Late-Flowering Shrubs Early

Early pruning does not remove any flower buds from shrubs which bloom in mid-summer, since all early buds on the plants produce leaves only. Flower buds develop on new growth to bloom in late summer.

Prune Early-Flowering Shrubs Later

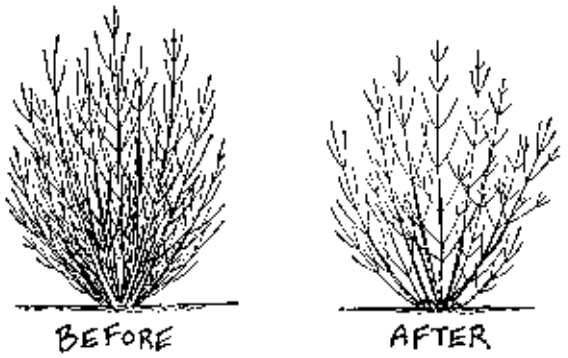
By pruning in March, many flowering buds would be removed. The season's flowers already exist in bud form. After blooms fade, pruning may be done without harm to buds. Prune during season specified, as late pruning will injure next year's buds.

Retain natural arching habit by pruning branches after flowering. Otherwise new growth starts at the tips of flowering branches and the shrub gets top-heavy.



Pinch off the growing tips and remove flowers as soon as faded.

Prune For Healthy Growth

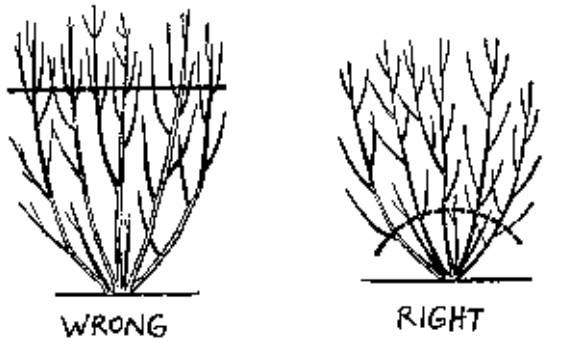


Before

Your shrubs will tell you when they need thinning. Shrubs such as Honeysuckle send up too many canes for best growth. Cut off a few of the oldest and least vigorous branches close to the ground. Do not injure bark on canes to be saved.

After

Note the difference thinning of canes makes. Air and light can now penetrate. Fewer canes promote vigor, health and vitality. Plants will produce more and larger blossoms. Slow growing, less vigorous shrubs seldom need thinning out.



Prune For Symmetry and Appearance

Cutting back tops of shrubs straight across is a common error. This encourages top-growth and the lower part of the shrub, with no foliage near the base, becomes woody and unsightly. Growth stays low and bushy when properly pruned.

Proper pruning promotes growth at the base of the shrub. Larger flowers on hydrangeas, altheas, hybrid tea roses, tamarix and butterfly bush are obtained by severe pruning. Colorful branches and twigs on dogwoods develop on new stems.

What To Do with Over-Grown Shrubs

Overgrown shrubs with little foliage near the base may be rejuvenated by cutting down each cane at the ground line in early March. All overgrown shrubs should be pruned thusly, even though early blooms may be sacrificed.

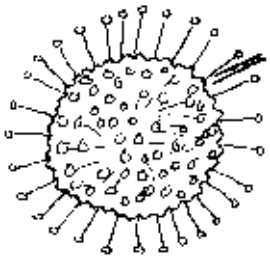
Shrubs cut back for rejuvenation will send forth new shoots in the late spring. This growth will be bushy with foliage clear to the ground. Pinch off tops of growth when desired height is attained. It usually takes two to three years to rejuvenate shrubs and hedges completely.

***A. melanocarpa* Black Chokeberry** 4-6' x same. Compact rounded shrub suckers profusely to form colonies. Showy white blooms in late spring. Glossy green foliage all summer turns brilliant wine-red in fall. Attractive black berries may be palatable enough for fresh eating, but probably more suited to juice, jelly or our feathered friends. Its black fruit and glossy foliage distinguish *A. melanocarpa* from *A. arbutifolia*. Not particularly picky about where it grows. Adaptable to wet or dry areas, sun or partial shade. Disease and insect free. Native eastern U.S. Z3. (6-12" plants)

4242 Black Chokeberry, $8.00

***Celastrus scandens* American Bittersweet** or **False Bittersweet** 20' or more. A highly ornamental native vine. The insignificant flower display in spring is followed by beautiful grape-like clusters of small red-orange-yellow berries for holiday wreaths and other dried flower arrangements. Also quite beautiful right on the vine. (This is *not* the invasive Asian Bittersweet—*C. orbiculatus*—which you should never grow!) Deep glossy summer foliage turns yellow-green in fall. Very vigorous climbing twining habit, will grow in nearly any soils although it does not like the driest sites. Suitable for covering porches, stone walls, rough hillsides, old cars and unsightly outbuildings. Prefers full sun. Male and female required for fruit. These are unsexed vines. Although some plants may have both male and female flowers, plant two or three plants to ensure fruit. Native eastern North America. Z3. *(*2 yr medium plants)

4268 American Bittersweet, $8.00



***Cephalanthus occidentalis* Buttonbush** 6-10' x 8' The masses of buttonbush bordering the shores of Massachusetts' Sudbury River are in full bloom each July as we follow Thoreau's "footsteps" in our kayaks. The spherical other-worldly-looking fragrant white flowers, up to 1" across, crawl with honey bees. Flowers appear for 4-6 weeks in summer and look like a cross between "sputnik," an "eighth-grade Helium-atom science project," and "one of those hats Sun Ra wore during his intergalactic music concerts." They make interesting dried flowers. The loose rounded branchy shrubs with bright green foliage seem to be growing *in* the river. Plant beside your stream or pond, *in* your pond, or even on an old floating log. It will secure its roots to the muck below and feed the ducks with its seeds (nutlets) in the fall. Recommended for naturalizing. Native to eastern U.S., west to New Mexico. Z4. **ME Grown.** (20-30" plants)

4270 Buttonbush, $9.00

***Chaenomeles lagenaria 'Rubra'* Red Flowering Quince** 4-6' x same. A multistemmed wide vase-shaped somewhat arching rounded shrub that I've had growing by the path up from the driveway for 20 years now. Looks good all season. The long bloom time is one of the brighter signs of spring. Prolific and showy 5-petaled crimson red flowers appear just before the foliage. The leaves are shiny dark green and slightly leathery, reminiscent of holly. Regularly sends up more stems but never seems to spread that much. The medium-sized fruit is edible but bitter. (This is not the edible Quince, *Cydonia oblonga*, of Owl and Pussycat fame.) However, it is valued for its culinary and medicinal qualities in east Asia. Average acid soil. Sun to partial shade. You might get better fruiting in full sun. Native to east Asia. Said to be Zone 5 but mine has done well in Zone 4. **ME Grown.** ($2^1/_2$-4' plants)

4271 Red Flowering Quince, $9.00

***Comptonia peregrina* Sweetfern** 2-4' x spreading. The narrow 3-6" deeply incised dark green aromatic fern-like foliage is what gives Sweetfern its common name. The deciduous shrub with its unevenly mounded arching habit will sucker almost indefinitely, creating maintenance-free colonies, a magnificent no-frills alternative to the lawn. Very nice as a specimen or a near perfect ground cover. Will thrive in sandy gravelly sterile infertile soils, places when grass won't dare to tread. Dry or wet. Even boulder cracks and roadsides. Sun to partial shade. Eastern U.S. native. Z2. **ME Grown.** (12-16" plants)

4274 Sweetfern, $9.00

***Cornus amomum* Silky Dogwood** 6-10' x same. Rounded rangy multistemmed shrub with attractive purple-red stems which are especially beautiful in winter. Valuable for naturalizing borders, streams and wetlands. Effective in masses or even windbreaks. Medium-fast growing. Yellowish-white flowers in late spring followed by sprigs of blue berries in midsummer that sit above the medium green foliage. Purple fall color. Deer will browse the stems and leaves and traveling songbirds and local game fowl will browse the berries. Prefers moist well-drained soils, although it is adaptable even to somewhat poorly drained wet locations. Does not like droughty spots. Sun or partial shade. Easy to transplant. Native eastern U.S. Generally listed as Z5 but probably hardier. Z4/5. **ME Grown.** (18-24" plants)

4277 Silky Dogwood, $9.00

***Corylus avellana* 'Contorta' Harry Lauder's Walking Stick** 6-12' x 15-20' Discovered in Frocester, Gloucestershire, England, 1863. A non-fruiting European filbert with a dense mounded form, grown for its contorted branches, leaves and catkins. Branching begins low and curves, twists and curls from the largest branch down to the tiniest twig. Even the drooping foliage is wrinkled and curled. It's a completely wonderful sight. Highly attractive year round, but especially in winter. Also used in flower arrangements, canes, handles and ornamental woodworking. Smoky dark grey—almost black—bark. Prefers well-drained loamy soil, full sun to partial shade. Remove root suckers as they appear. Z4–5. (12-28" grafted plants)

4283 Harry Lauder's Walking Stick, $30.00

***Cotinus coggygria* 'Royal Purple' Smokebush** 8-10' x same. Boskoop, Holland. Upright spreading shrub with velvety dark purple foliage and amazing purplish-pink inflorescences that look like large smoke puffs on top of the branches throughout summer. Each one of these cotton candy-like poofs is composed of a web of fine stems, the smallest of which are lined with tiny hairs that reflect the light and create an ethereal effect. It's really quite remarkable. For maximum glow, plant in a sunny location. Often considered a Zone 5 plant, but reliably grows back and flowers each summer in Zone 4. Cut to the ground each fall for more vigorous and more brightly colored growth. Red-burgundy fall color. Adaptable to a wide range of pH and soils although it prefers it well-drained. Disease free. Native southern Europe to China. Z4. (6-12" plants)

4285 Royal Purple Smokebush, $8.00

***Euonymus alatus* 'Compactus' Burning Bush** 5-6' x same. Also called **Dwarf Winged Euonymus** or **Spindle Tree**. One of the finest all-around landscape plants, closely related to the native Burning Bush. Excellent in hedges, screens, foundation plantings or as a specimen. Dense compact rounded form. The corky ridged wings of bark on the stems are particularly interesting in winter. Brilliant burning-red fall color. No serious diseases and pest free. Very adaptable to many soils, sun or shade, prefers good drainage. Considered invasive in some regions, particularly farther south. Check with your local extension service for more information. Native of northeastern Asia to central China. Z4. (6-12" plants)

4320 Burning Bush, $8.00

***Forsythia* x *ovata* 'Northern Gold' Forsythia** 6-8' x 5-7' Ottawa, Canada, 1979. This was a good spring to see who was planting Northern Gold and who was planting the junk that some nurseries are passing off on unsuspecting gardeners. If your forsythia bloomed only from the snow-line down, you were duped. Northern Gold has not only the outstanding bud hardiness necessary for flower production *above* the snow line, but also outstanding golden-yellow flowers. You can have a full bloom every year! Upright form with grey-yellow branches clad in rich green healthy foliage. Prefers moderately fertile, slightly acid to neutral soils with good drainage. One of the first flowers in spring. Bred from *F. ovata*, a hardy dependably blooming Korean species. Z3. **ME Grown.** (1-2' plants)

4340 Northern Gold Forsythia, $8.00

***Fothergilla major* Large Fothergilla** 6-10' x same. Magnificent rounded multistemmed shrub with slender crooked branches becoming dense with maturity. Amazing small creamy-white honey-scented bottlebrush-shaped flowers (inflorescences) with long showy stamens. Blooms in spring, usually around lilac time. Attractive dark green to blue-green leathery leaves turn brilliant yellow, orange and scarlet, often on the same leaf, in fall. A great shrub year-round. Prefers moist well-drained peaty acidic soil but is very adaptable. Sun to $^{2}/_{3}$ shade. Disease- and pest-free. Native to southeastern U.S. Z4. **ME Grown.** (6-12" plants)

4358 Large Fothergilla, $10.00

***Hydrangea arborescens* 'Annabelle' Hydrangea** 3-5' x same. A major improvement over the old standard herbaceous hydrangea. A very upright yet rounded shrub, the earliest and most erect of the hydrangeas. Large clusters (up to 1') of showy white to faint-yellow flowers bloom in late June till September. Big 5-6" almost heart-shaped foliage. Grows fast, suckers freely, thrives in shade. Cut to the ground and fertilize lightly in late winter for stunning bloom next summer. Suited to perennial borders and naturalized gardens. A Pennsylvania Horticultural Society's Gold Medal Plant Award winner. Species native to eastern U.S. Z3. (1-yr #1 plants)

4375 Annabelle Hydrangea, $12.00

***H. macrophylla* 'Endless Summer' Hydrangea** 3-5' x same. Bailey Nursery Introduction, St. Paul, MN, 2004. This is the blue flowering hydrangea that is causing all the hoop-la in the gardening world. Perhaps you saw it on the cover of *People, Places & Plants*. Why is Fedco offering such a trendy plant you might ask? For good reason. Most Bigleaf Hydrangeas (*H. macrophylla*) bloom only on old wood. After a typical Maine winter you get dead flower buds and no flowers. 'Endless Summer' blooms on old and new wood. Even if the plant dies to the ground, you'll get those large showy 8" mop-head blooms *that* summer. Not only that, but it will bloom blue in acid soils and pink is alkaline soils. Dense dark green foliage. Bronze fall color. Sun or partial shade. Prefers deep well-drained acid soils with lots of organic matter. If your soil needs acidification, check out the article in the Summer 2003 *People, Place & Plants* for some good suggestions. Native to Japan. Z4. (medium plants)

4377 Endless Summer Hydrangea, $18.00

***H. paniculata* 'Grandiflora' Pee Gee Hydrangea** 8' x 10-15' Large upright woody shrub with arching branches and very showy large conical double white flower-clusters that bloom July-August, turning pink-bronze in autumn. Small serrated yellow-green leaves illuminated with a fine yellow edge. Prefers good loamy moist well-drained soil in sun or partial shade, but difficult to kill; urban tolerant. Species native to North and South America and eastern Asia. Z4. **ME Grown.** (1-2' plants)

4380 Pee Gee Hydrangea, $10.00

***Ilex verticillata* Winterberry** A staple of the Maine landscape. Deciduous suckering holly with clusters of upright stems. Lustrous deep green leaves retain their color long after they're cut for decoration. Richly foliated, but open enough to display its interesting branching structure. Best known for its profusions of bright red 3/8" berries which stand out after the leaves have fallen and keep their color all winter, looking spectacular against the snow. Excellent fall wildlife forage plant. Tolerates dry conditions but prefers moist or wet acidic soil, even standing water. Sun or partial shade. No serious pests or diseases. Male and female plants required for fruit. Native from midwestern to eastern U.S. Z4.

***I.v.* 'Red Sprite'** 3-5' x 4-8' Female plant. USDA introduction. Smaller plant than the straight species with an attractive low loose rounded form. Winner of the 1998 Cary Award for Distinctive Plants for New England. 'Jim Dandy' male required for fruit. (6-12")

4398 Red Sprite female Winterberry, $10.00

***I.v.* 'Jim Dandy'** 3-6' x 4-5' Male selection to pollinate 'Red Sprite' winterberry. One will pollinate several females. (6-12")

4400 Jim Dandy male Winterberry, $10.00

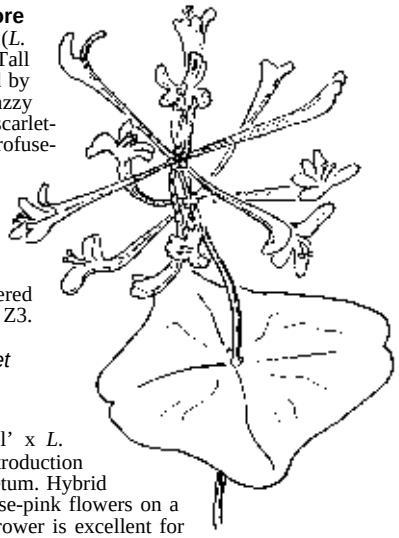
***I.v.* 'Winter Red'** 9x8' Female plant. Larger than 'Red Sprite'. Darker green foliage. Winner of the 1995 Styer Award. 'Southern Gentleman' male required for fruit. **ME Grown.** (6-24" plants)

4403 Winter Red female Winterberry, $10.00

***I.v.* 'Southern Gentleman'** Male selection to pollinate 'Winter Red' winterberry. Don't be deceived by the name—it's hardy. One will pollinate several females. (18-24" plants)

4405 Southern Gentleman male Winterberry, $10.00

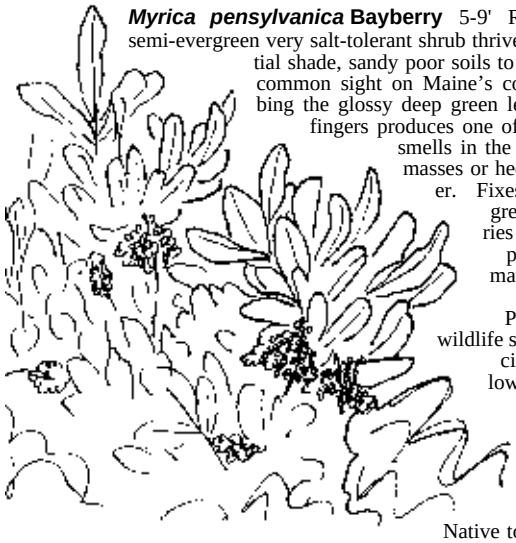
***Lonicera* x *brownii* Dropmore Scarlet Honeysuckle** 10-20' (*L. sempervirens* x *L. hirsuta*) Tall climbing honeysuckle developed by FL Skinner in Manitoba. Jazzy whimsical clusters of 1 1/2" scarlet-orange tubular flowers bloom profusely and tirelessly from early summer into late fall. Striking blue-green foliage on red stems. Great for fence or arbor. Easy to grow; generally free of insects and diseases. Flowers the first year. Considered the hardiest vine honeysuckle. Z3. **ME Grown.** (2-yr medium plants)



4450 Dropmore Scarlet Honeysuckle, $8.00

***Lonicera* 'Honey Rose' Honeysuckle** 8-10' (*L.* 'Zabel' x *L. tartarica* 'Arnold Red') New introduction from U Minn Landscape Arboretum. Hybrid selection with abundant deep rose-pink flowers on a rounded upright shrub. Rapid grower is excellent for screens and hedges. Attractive blue-green foliage, resistant to honeysuckle witch's broom aphid. Full sun or partial shade. Prefers good loam but tolerates most soils and dry sites. Z4. (6-12" plants)

4459 Honey Rose Honeysuckle, $8.00



***Myrica pensylvanica* Bayberry** 5-9' Rounded deciduous semi-evergreen very salt-tolerant shrub thrives in full sun to partial shade, sandy poor soils to heavy clay soils. A common sight on Maine's coastal islands. Rubbing the glossy deep green leaves between your fingers produces one of the most delicious smells in the world. Excellent in masses or hedges, tends to sucker. Fixes nitrogen. Small greyish-blue waxy berries produced on female plants are highly aromatic, historically used for candle making. Plants feed numerous wildlife species and are especially craved by swallows. Tends toward being dioecious. Male and female plants required for good fruit development. We're offering unsexed plants. Native to eastern U.S. Z2/3. **ME Grown.** (12-18" plants)

4480 Bayberry, $8.00

***Parthenocissus quinquefolia* var. *engelmannii* Virginia Creeper** or **Woodbine** 30-50' Perhaps you're building a hideaway or a bomb factory and you want to keep it inconspicuous. You need Virginia Creeper. Though not technically an ivy, this is the plant responsible for the *Ivy League*. Deciduous vine with a twining habit crawls on the ground or up trees and cements itself with tendrils and adhesive discs to walls, trellises, buildings. Needs no support. Rich lustrous deep green foliage in five-leafed clusters. Bronze-reddish in spring, brilliant red-purple in fall. Inconspicuous greenish white flowers. City and country birds alike love its small bluish-black berries. Grows in practically any soil. Requires no maintainance. Full sun to full shade, tolerates exposed sites, wind, pollution, sand, salt, cities. Native of south, central and eastern U.S. Z3. **ME Grown.** (well-rooted 2-yr-old transplants)

4500 Virginia Creeper, $8.00

***Philadelphus coronarius* Sweet Mockorange** 10x10' An old favorite that you don't see offered much anymore. We offer the straight species because it is the only mockorange that flowers reliably up here. Large coarse loosely upright arching fragrantly blooming shrub. Loved for its sweet alluring scent and its beautiful pure-white, slightly cupped, 4-petaled blossoms in spring, soon after lilacs fade. Each flower is accented by a spray of golden yellow anthers. The contrast of the flowers and deep dark blue-green foliage is lovely. Prefers moist rich well-drained soils, but will grow well in most conditions. Full sun to partial shade. Prune after flowering. Native to western Asia. Z4. (18-24" plants)

4530 Sweet Mockorange, $10.00

***Potentilla fruticosa* Potentilla** Also called **Shrubby Cinquefoil** or **Widdy**. A compact rounded to broadly rounded bushy shrub with showy five-petaled rose-like flowers. Flowers all summer long, beginning the first year. Excellent landscape plant with very small attractive grey-green compound leaves, for shrub borders, low hedges, foundations. Full sun or partial shade. Loved by bees. Best in fertile moist well-drained soil, but tolerates poor dry soil. Unbelievably hardy. Native to Northern Hemisphere. Z2. (9-18" plants)

***P. f.* 'Dakota Sunspot'** 2½-3' x 3-4' N Dakota St Univ introduction. Deep golden-yellow 1" blooms. Dwarf compact form. Blooms all season.

4576 Dakota Sunspot Potentilla, $8.50

***P. f.* 'Katherine Dykes'** 2-3' x 3-4' Soft lemon-yellow 1" blooms. Silver-green foliage.

4582 Katherine Dykes Potentilla, $8.50

***P. f.* 'Mango Tango'** 2x2' Univ of Manitoba introduction, Canada. Unusual tri-color orange, red and yellow blooms. Bright green foliage. Colors look brightest in cool weather and full sun.

4583 Mango Tango Potentilla, $8.50

***P. f.* 'McKay's White'** 2-2½' x 2-3' Sport of Katherine Dykes. McKay Nursery introduction, Wisconsin. Creamy white flowers. Soft green foliage.

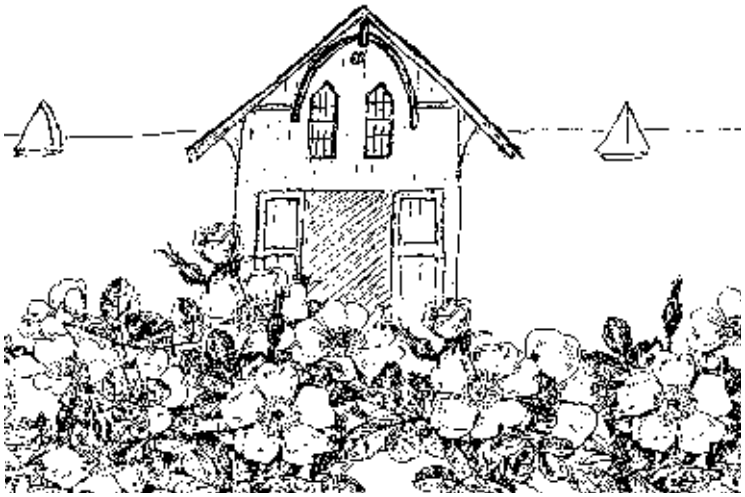
4584 McKay's White Potentilla, $8.50

***Rhus aromatica* Fragrant Sumac** 5-6' x 6-8' Low irregular fast-spreading shrub with glossy blue-green aromatic foliage. Suckers from the roots, and even branches touching the ground will root themselves. Quickly produces a colony, useful in erosion control on banks or hillsides. Beautiful small bright yellow flowers in spring. Leaves turn orange to brilliant scarlet in fall. Pubescent stems. Red hairy drupe-type fruit on females. Dioecious; these are unsexed plants. Easy to transplant, adaptable, prefers acid soil, sun to partial shade. No disease problems. Attracts birds and butterflies. Native to eastern U.S. Z3. (12-18" plants)

4620 Fragrant Sumac, $8.00

***Salix gracilistyla* 'Melanostachys' Black Pussy Willow** 6-10' x same. A very attractive fast-growing plant for wetland situations. Deep purple-black male catkins in early spring, suitable for the dining table or kitchen windowsill. The rather short foliage opens orange and then turns a deep green. Stems assume a rich purple-black color in winter. Very nice dark colors all year. Winner of Royal Horticulture Society Award of Garden Merit. Prune in summer or fall. Full sun, prefers moist soils, pH adaptable but does not like shallow chalky soils. Native to eastern Asia. Z4. **ME Grown.** (12-16" plants)

4738 Black Pussy Willow, $9.00

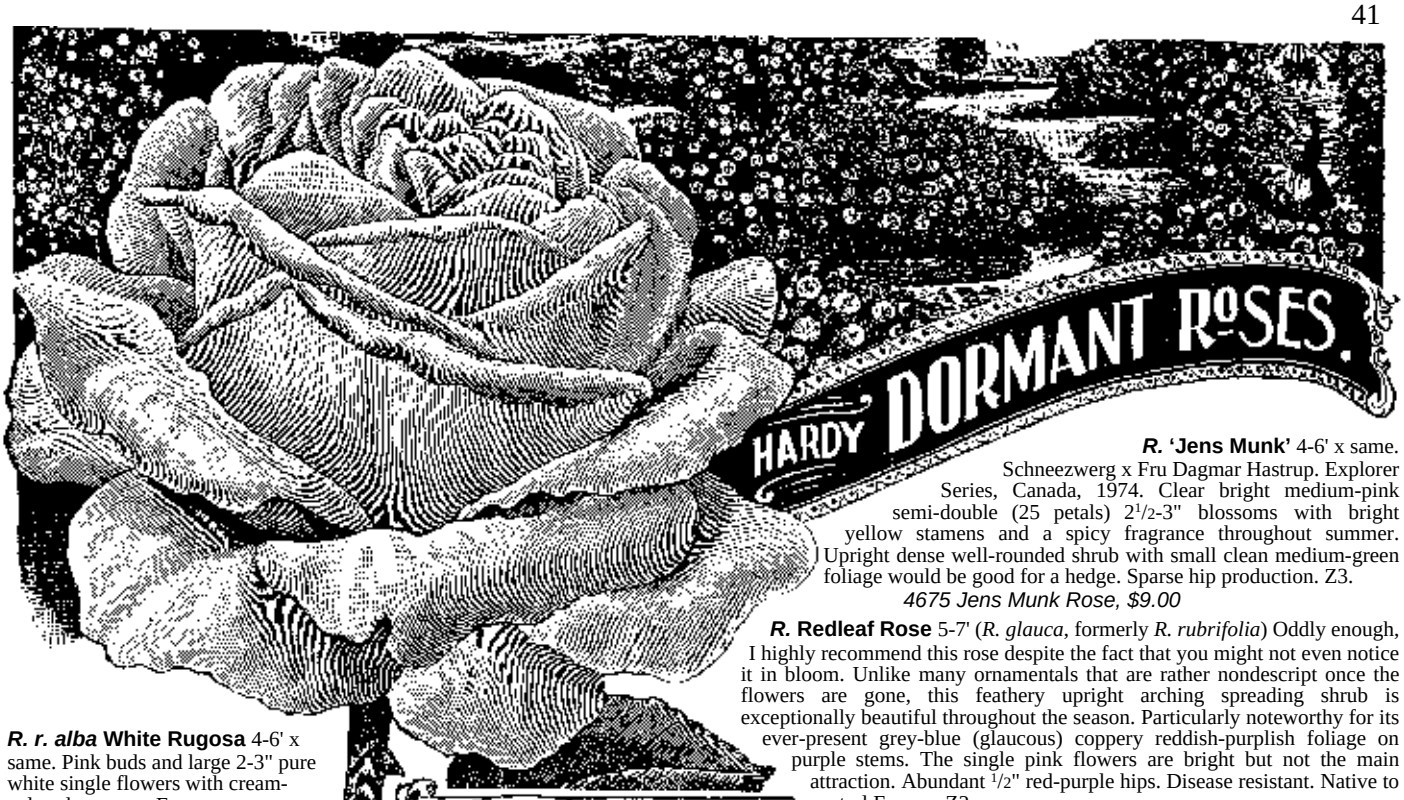


Rosa **Rose** Exceedingly hardy, vigorous, disease- and pest-resistant, and significantly easier to grow than most named varieties, these roses need not be pampered; all are rugged and hard to kill, forming beautiful hedges. Recommended as a solution for those who want roses but are tired of struggling with tender hybrid tea roses, or who associate roses with pests, disease and winterkill.

We focus on fragrance in our rose selections. If the description says very fragrant, it is! Each year we offer a different selection of the best varieties available. If your favorite is not on the list this year, we may be offering it in 2005. All roses are stocky well-rooted plants that we cut back to about 6" to encourage optimal growth and bloom. (stocky well-rooted plants)

Rosa rugosa 4-6' x same. Also called **Japanese Rose** or **Beach Rose**. Vigorous spreading shrub. Flowers range from deep pink to white. Red hips up to 1" for jams, teas, and fresh eating right off the bush. Flowers used in traditional Chinese medicine to regulate *qi* and promote blood circulation. The dark green wrinkled, "rugose" leaves form a backdrop for the highly fragrant single flowers and the large edible hips which follow. Blooms form on both old and new wood, so pruning is unnecessary except to control size. Likes full sun, well-drained fertile soil with a pH of 6-7, but will grow in depleted soil and even sand. Tolerates salt, pollution, and drought; practically care-free. Native to China and Japan, and a common sight all along the New England coast. Z2. (2-3' transplants)

4627 Rosa rugosa, bundle of 3, $16.00

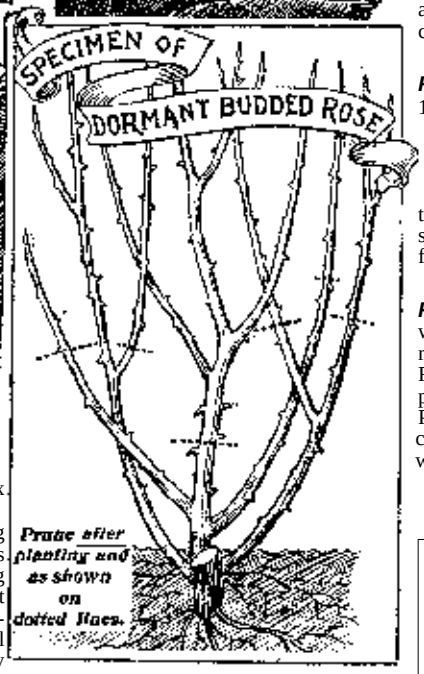


***R. r. alba* White Rugosa** 4-6' x same. Pink buds and large 2-3" pure white single flowers with cream-colored stamens. Fragrant, recurrent bloomer. Large orange hips. Orange and scarlet fall foliage color. Incredibly rugged; tolerates clay, muck, sand and salt. Disease resistant. Z4.

4630 White Rugosa Rose, $9.00

***R.* 'Charles Albanel'** 1-3' x 3-4' Souvenir de Philemon Cochet x seedling, Explorer Series, Canada, 1982. Extremely nice low-growing spreading dense ground cover. Fragrant 3-4" semi-double mauve-reddish-pink blooms with prominent yellow stamens. Blooms all summer. Dark green foliage turns red-orange in fall. Red-orange hips. Highly disease-resistant. Z2/3.

4647 Charles Albanel Rose, $9.00



***R.* 'Golden Wings'** 4-6' [Soeur Therese x (*R. spinosissima altaica* x Ormiston Roy)]. Shepherd introduction, USA, 1956. Long deep yellow buds open to light yellow petals with deeper yellow centers and contrasting burnt-orange-yellow stamens. Large fragrant 4" single blooms are borne in profuse clusters. Begins flowering early and continues all summer. Upright vigorous form. Showy orange hips in fall. Winner of the American Rose Society National Gold Medal Certificate in 1958. Z4.

4660 Golden Wings Rose, $9.00

***R.* 'Hansa'** 7x7' Unknown parentage. Schaum and Van Tol, Holland, 1905. A large vigorous vase-shaped mound blooming throughout early summer, with rebloom in fall. Large 3" semi-double (25-30 petals) very fragrant purplish-red flowers. Prolific large showy red-orange hips. Glossy dark green disease-free foliage turns yellow-orange in fall. Z3.

4662 Hansa Rose, $9.00

***R.* 'Henry Kelsey'** 6-7' *R. kordesii* hybrid x seedling. Explorer Series, Ottawa, 1984. Hardy climbing—or, more accurately, long caned—variety. Velvety-red semi-double (28 petals) 3" blooms with brilliant golden stamens. Similar to 'Champlain' although slightly larger and a slightly deeper red. Fades to deep rosy pink. Repeat bloomer and said to have a spicy fragrance, although I don't find it especially fragrant. Shiny deep bluish-green foliage. Tie up the long arching canes to a trellis or arbor, or let them reach low across the garden. Branches can be left to overwinter with minimal (if any) winter damage. Mine survived -30˚ with no problem. Disease resistant. Z3.

4670 Henry Kelsey Rose, $9.00

***R.* 'Jens Munk'** 4-6' x same. Schneezwerg x Fru Dagmar Hastrup. Explorer Series, Canada, 1974. Clear bright medium-pink semi-double (25 petals) 2½-3" blossoms with bright yellow stamens and a spicy fragrance throughout summer. Upright dense well-rounded shrub with small clean medium-green foliage would be good for a hedge. Sparse hip production. Z3.

4675 Jens Munk Rose, $9.00

***R.* Redleaf Rose** 5-7' (*R. glauca*, formerly *R. rubrifolia*) Oddly enough, I highly recommend this rose despite the fact that you might not even notice it in bloom. Unlike many ornamentals that are rather nondescript once the flowers are gone, this feathery upright arching spreading shrub is exceptionally beautiful throughout the season. Particularly noteworthy for its ever-present grey-blue (glaucous) coppery reddish-purplish foliage on purple stems. The single pink flowers are bright but not the main attraction. Abundant ½" red-purple hips. Disease resistant. Native to central Europe. Z2.

4703 Redleaf Rose, $9.00

***R.* 'Schneekoppe'** 3x3' (Snow Pavement 6446) Baum, Germany, 1986. I was smitten by this rose when I visited Lloyd Brace's Roseraie at Bayfields down in Waldoboro and was smart enough to buy a plant that day. It's been thriving ever since. Very faint lilac-purple blooms—practically white—but most definitely not so. Some say slightly pink, but I see purple. The light color is soothing to the eyes. Semi-double, recurrent and fragrant. Slowly spreading, suckers here and there. Loose low shrubby form. Red hips. Clean foliage. Disease resistant. Z3.

4715 Schneekoppe Rose, $9.00

***R. woodsii* Mountain Rose** 3-6' x same. Thicket-forming native with an upright arching habit and sweet-scented light to medium-pink 1½-2" 5-petaled flowers in early summer. Recommended for hedges and borders. Stop mowing nearby after planting and before too long you'll have a hedge. Glossy foliage. Persistent glossy red hips. Full sun or partial shade. Will thrive in challenging conditions and average soil. Disease-free. Native to western U.S. Z4.

4734 Mountain Rose, $9.00

Roses prefer full sun (at least 4-6 hrs per day) and a pH of 6.0-7.0. Space them 4-6' apart. They will do well in most well-drained soils with a good amount of organic matter. In locations with poor drainage, add gravel at the bottom of the planting hole, or build in drainage. Pick a site with good air drainage, but avoid sites with cold northwest winds. Avoid competition with tree roots.

Plant roses as early as soil can be worked. Most roses' roots don't spread beyond the original hole, so dig a bushel-basket sized hole, as deep as 2' or more. We recommend a bale of rotten hay in the bottom of the planting hole. Mix soil with well-rotted manure and compost in liberal quantities. Add a coffee-can full of rock phosphate or bone meal.

Soak in water overnight or up to three days before planting. Prior to planting, prune roses back to 3 canes, 4-5" tall. Plant them 1" below the level they were in the nursery. Add water as you fill in the hole to puddle it in. Mound soil around branches to prevent them from drying out, and to encourage buds to sprout. As the buds open, pull back the soil to the correct level.

Shrub roses and climbers will require little pruning in later years. Remove dead or broken branches, and periodically cut out the oldest wood. Keep them well mulched to retain moisture and reduce weeds. Add 2 shovels full of composted manure to each crown late in the fall. For more information see *Growing Old Fashioned Hardy Roses Organically* by Suzanne Verrier in the book section of our Seed Catalog.

Syringa **Lilac** is known nearly everywhere by some variation of the Persian word *lilak* (meaning 'bluish'), but lilacs actually come in colors ranging from brilliant white to pink to red to every conceivable shade of purple and even blue. From small shrubs to large shrubs and trees, compact vase-shaped specimens to huge rounded spreading masses, only the crabapple offers greater selection among ornamental woody plants. Twenty-three species make up the genus *Syringa*, two of which are native to the limestone mountains of southeastern Europe, while the rest are native to the temperate Far East. First brought to America over three hundred years ago by French Jesuit missionaries, there are ancient specimens on Michigan's Mackinac Islands with trunks nearly two feet in diameter.

One of the highlights of this past spring was my visit to Syringa Plus in West Boxford, MA. It's just a few minutes off the highway down to Boston. Evie King gave me the full tour of the spectacular display gardens and she and Roger Coggeshall showed me around the propagation house. It's inspring to see what two people can accomplish. If you love lilacs, stop in and visit them some spring.

Lilacs are excellent alone or in hedges. Deep green glossy heart-shaped foliage looks good from spring through fall. Intensely fragrant blooms in May over a period of several weeks.

As with roses and crabapples, we vary our list each year to give you a wide selection over the course of time. If you have suggestions for cultivars you'd like us to offer, please let us know. The Lyle Littlefield Garden remains the best place in Maine to see lilacs in bloom. If words can't do it for you, go up to Orono next May. Many of the varieties we sell are there. (See #**4212** for Tree Lilac.)

S. vulgaris **Common Purple Lilac** 12-15' x same. A mass of medium-light purple blooms every year. A magnificent New England sight for nearly 400 years. When a nursery friend looked out my living room window and thought I had some fancy new cultivar, I chuckled, "Nope, just the good old common purple." Never a disappointment. Suckers freely, the best lilac for a spreading hedge. Z2. **ME Grown.** (18-36" plants)

4790 Common Purple Lilac, $9.50

S. v. **'Atheline Wilbur'** 10x10' (Rochester x Edward J. Gardner) x Rochester. Fiala introduction, 1980. Very fragrant large floppy ragged pink panicles. Buds are a darker rose-lavender punctuating the soft inviting color of the blooms. There may be a hint of lavender in there, but only a hint. Very nice. Evie's comment when we were touring the display gardens at Syringa Plus was, "It could fade to white, but it doesn't!" Z3/4. **ME Grown.** (1-2' plants)

4796 Atheline Wilbur Lilac, $9.50

Lilacs are adaptable, easy to grow and practically maintenance-free. Plant them in a well-drained location in moderately rich soil. Sandy gravelly loam is perfect. They prefer sun at least two-thirds of the day. We suggest planting them with a shovelful of lime. Add another shovelful of lime every three years. A yearly mulch of manure or compost will encourage spectacular annual blooming.

How to Prune Lilacs

As the plant matures, prune off a quarter of the new suckers and oldest growth, a few main stems each year, and keep them trimmed down to an attractive height. No need to cut off spent flowers, but for best appearance remove flower heads as soon as through blooming, using care not to injure closest pair of leafy branches.

S. v. **'Katherine Havemeyer'** 10-12' x 10' Victor Lemoine et Fils, Nancy, France, 1922. Fragrant large heavy densely filled double lavender-pink flower clusters. Decidedly more lavender and less pink than Atheline Wilbur. I'd call it pinkish purple. The darker buds create a two-toned effect. Very beautiful. Large long leaves contrast vividly with the blossoms. Roger Coggenshall of Syringa Plus, who has propagated lilacs for more than several decades, considers this one of his favorites. Z3. **ME Grown.** (2-4' plants)

4830 Katherine Havemeyer Lilac, $9.50

S. **x** ***chinensis*** **'Lilac Sunday'** 10x12' Seed from Beijing Botanic Garden, Arnold Arboretum Introduction, 1997. Lilac Sunday is the huge annual May celebration of lilacs at the Arnold Arboretum in Boston. It's a lot of lilacs, a lot of people and a lot of fun. Go. Lilac Sunday is also a spectacular new lilac introduction from the arboretum. Delicately fragrant single pale purple flowers bloom all along the sides and tips of the willowy arching branches, creating an amazing plume-like effect. In the sun the upper surfaces of the panicles acquire a dazzling white frosted quality. We've been looking forward to offering this lilac since the day we first saw it at…Lilac Sunday! Blooms with the *vulgaris* varieties. Being tried in Zone 3, hardy in Zone 4. **ME Grown.** (2-4' plants)

4835 Lilac Sunday Lilac, $9.50

S. v. **'Ludwig Spaeth'** 10-12' x same. ('Andenken an Ludwig Späth') Späth Nursery, Berlin, 1883. Ludwig Spaeth's deep rich purple flowers are always a knock-out. Dark, yes, but never so dark that the color becomes flat and the highlights lost. This is a magnificent purple. Although I hesitate to use the word red, there is enough red in the purple to give it a regal look. Single deep purple flowers on large upright spires. Upright growth habit. Suckers profusely—an excellent hedge plant. Some say the newer cultivars are superior but I don't see it. Still a must for every yard! Z3. **ME Grown.** (6-12" plants)

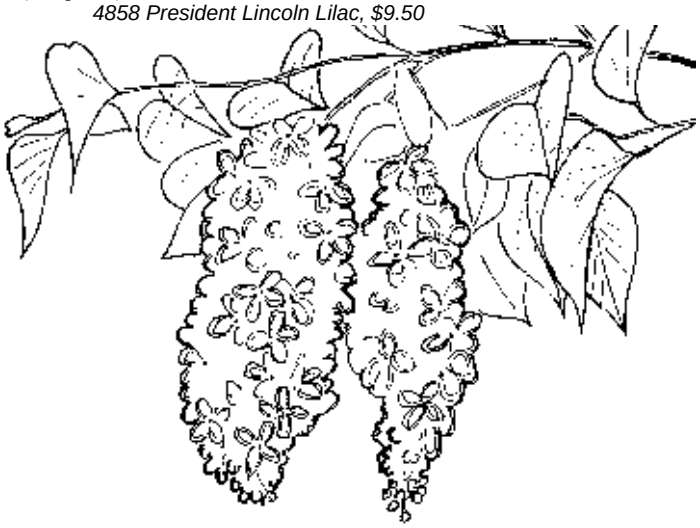
4837 Ludwig Spaeth Lilac, $9.50

S.v. **'Mme. Lemoine'** 12x12' Marie Legraye x open pollinated. Victor Lemoine et Fils, Nancy, France, 1890. It really is pure white. Mme. Lemoine is the standard by which other white lilacs are judged. Very fragrant large flowers in clusters so thick, the shrub looks like one massive bloom. Open slightly wide-growing shrub. Provides a beautiful accent for the pinks and purples. A favorite of the late plantsman Roger Luce of Newburgh who maintained a magnificent collection of lilacs for many years. Z3. **ME Grown.** (2-4' plants)

4842 Mme. Lemoine Lilac, $9.50

S. v. **'President Lincoln'** 10x10' ('Alba Virginalis' x op) John Dunbar introduction, Rochester, NY, 1916. While the name 'lilac' means 'bluish' in Persian, and the native lilacs of Romania and Serbia have blue genes, so to speak, blue lilacs are rare. A few newer blue cultivars have been introduced in recent years but President Lincoln remains at the top of the heap. Given a chance it will spread from suckers to form a massive shrub covered with smallish clusters of exceptionally fragrant single light lavender-blue blooms. Especially when seen in combination with other cultivars, this lilac is a beautiful blue. First to bloom in the spring and the last to quit. Z3. **ME Grown.** (2-4' plants)

4858 President Lincoln Lilac, $9.50



S. v. **'Sensation'** 10x10' Mutation of 'Hugo de Vries'. Dirk E Maarse introduction, Aalsmeer, Netherlands, 1938. Very fragrant large single reddish-purple blooms, with each petal edged in pure white. The effect is an interwoven pattern of purple and white. Unique and beautiful; a real show-stopper. Plant this one where you can see it from not too far away. Deep purple buds. Upright rounded open form. *Fine Gardening* magazine calls it "sensational purple flowers with pinstripe margins." Selected as the cover photo for John Fiala's classic text, *Lilacs, The Genus Syringa*. Z3. **ME Grown.** (2-4' plants)

4868 Sensation Lilac, $9.50

***Sorbaria sorbifolia* Ural False Spirea** 5-10' x same. Fast-growing erect multistemmed fern-like shrub that spreads by suckers and forms colonies. Beautiful white 4-10" flower panicles form on new wood in late spring and early summer. Its common name suggests spirea and its botanical name suggests mountain ash. Although the green compound foliage does resemble mountain ash, to me it has a fern-like or sumac-like quality. The arching stems do remind me of some of the more dramatic spireas. Easy to establish and ideal for banks, borders and former lawns. Give it room to move. Full sun or light shade in moist well-drained humusy soil. Prune and cut off old flowers in spring before it begins to grow. Extremely hardy. Native to northeast Asia. Z2. **ME Grown.** (20-30" plants)

4748 Ural False Spirea, $8.00

***Spiræa* Spirea** includes nearly 100 species of deciduous shrubs native to the northern hemisphere, all with profuse and often very showy small white, pink or red flowers, arranged in flat or round clusters or in pyramidal spikes. Varying in form and size, spireas are very adaptable, thriving in most soils with a full to partially sunny exposure and average moisture. Two well-known natives are Meadowsweet (*S. latifolia*) and Hardhack (*S. tomentosa*). Spring flowering species bloom on last season's growth. Prune some of the growth in early spring to increase the flower cluster size. The summer flowering species bloom on this year's growth and usually require no pruning at all. Each year we offer a few of our favorite spireas, varying our selection annually.

***S. x bumalda* 'Coccinea' Dwarf Red-Flowering Spirea** 3x3-5' A bud sport of 'Anthony Waterer'. Subtle and beautiful, with vibrant deep pink and crimson flat-topped red flowers that perch above the compact rounded waist-high shrub with bluish-green foliage. Easy to transplant and to grow, undemanding, and covered in flowers. Tolerates all but wet soils. Prefers full sun to partial shade. Deadhead to stimulate rebloom. Z4. (12-18" plants)

4755 Dwarf Red-flowering Spirea, $9.00

***S.* x *cinerea* 'Grefsheim'** 4-5' x same. (*S. cana* x *S. hypericifolia*) Norway, before 1884. Dense shrub with arching branches. Not as large as 'Vanhoutte' and flowers even earlier. The leafless stems are completely covered with white flower clusters in spring. According to Michael Dirr, "about as handsome an early flowering spirea as one could hope to find." When the fine light feathery foliage appears, it is small and a soft blue-green. Will thrive in any good soil with plenty of moisture. Z4. **ME Grown.** (16-24" plants)

4757 Grefsheim Spirea, $8.00

***S. japonica* 'Snow White'** 6x6' Wide arching shrub with long graceful light green shoots. Fast growing. Cascading branches covered with white flowers in May-June. Good yellow fall color. Full sun to light shade. Prefers well-drained garden soil. Prune after flowering. Native to eastern Asia. Z3. **ME Grown.** (3-4' plants)

4766 Snow White Spirea, $8.00

***S. tomentosa* Steeplebush** 2-5' x same. Also called **Hardhack**. One of our native spireas. Not so showy as those Asians perhaps, but quite beautiful in its own way. Upright pyramidal or slightly arching form found typically in damp open spaces, swamps, and the shorelines of our ponds. Bright rosy-pink blooms appear for about a month in mid-late summer perched on the apex and side shoots creating a steeple-like effect. Soft-textured deeply veined medium-small light green furry (tomentose) foliage looks quite similar to Nanking Cherry (*Prunus tomentosa*). Full sun to partial shade. Likes moist well-drained locations. Native to eastern North America. Z4. **ME Grown.** (18-24" plants)

4772 Steeplebush Spirea, $8.00

4790-4868 ***Syringa* Lilacs** on page 42.

***Viburnum sargentii* 'Onondaga' Viburnum** 6-8' x same. A U.S. National Arboretum introduction, Ohio Plant Selection Committee, 1966. Multistemmed upright rounded coarse-textured shrub with three-pronged deeply incised maple-like foliage that opens dark maroon and maintains a velvety maroon tinge as it matures. Leaf stems are purple. Nice color combination. Creamy white 2-5" flat-topped flowers with a trace of purple followed by translucent red berries in late summer. Red fall foliage. Full sun to part shade, adaptable to extremes of soil and pH. Native to northern Asia. Z3. **ME Grown.** (10-16" plants)

4963 Onondaga Sargent Viburnum, $9.00

***V. sieboldii* 'Seneca' Viburnum** 12-14' x same. Resulted from a self-pollination of *V. sieboldii*. U.S. National. Arboretum introduction. Large shrub with very long simple elliptic electric-lime-green foliage. Absolutely wild color. Massive creamy-white flowers bloom in May-June followed by blood-red fruit in August that persists for up to 3 months. Full sun to partial shade. Prefers moist well-drained soils. Needs sufficient moisture as leaf scorch will develop under dry conditions. pH adaptable. Native to Japan. Z4. **ME Grown.** (10-16" plants)

4964 Seneca Siebold Viburnum, $9.00

***Weigela florida* 'Java Red' Weigela** 3-4' x 4-5' Java Red has a compact rounded form and deep green foliage flushed with red and sharply veined with yellow. The red flower buds open to dark pink bell-shaped blossoms in late spring and early summer. Excellent as a mass or as a specimen. Grower Moe Thibodeau calls it "dramatic." Prefers full sun and well-drained soils but is quite adaptable. Pollution tolerant. Native to eastern Asia. Z4. **ME Grown.** (16-24" plants)

4965 Java Red Weigela, $8.00

***W. f.* 'Rumba' Weigela** 3x3' Part of Dance Series of Weigelas, Ottawa Exp Stn, Canada. Compact rounded form. Ruffle-edged foliage opens an intense florescent green and then darkens to deeper, but no less intense, green finely edged with pink. Quite the nice foliage. Dark red yellow-throated flowers bloom all summer. Z4. **ME Grown.** (10-16" plants)

4975 Rumba Weigela, $9.00

***Wisteria macrostachya* 'Aunt Dee' Wisteria** up to 50' (Species also called **Kentucky Wisteria**.) Magnificent twining vine with pinnate leaves for pillars, trellises, arbors, walls, even trees. Long 12" racemes of lilac-purple lightly fragrant flowers in late spring or early summer look almost like bunches of lavender grapes hanging from an arbor. Bean-like smooth green seed pods to 4" long. Prefers full sun in moderately fertile, well-drained soil. May need protection in Zone 4 but has even been known to flower in Zone 3. Native of southeastern U.S. (2-yr. medium vines)

4985 Aunt Dee Wisteria, $9.00

Tender Summer Bulbs are like fall-planted bulbs in that they give you an impressive display for comparatively little effort. Bulbs, corms and tubers store their energy which needs only some earth, moisture and sun to be released. They are not hardy in our climate. Energetic people lift and store them over the winter (details in the sidebar); the rest of us treat them as annuals. Each selection is offered in three different quantities; note the different item number for each package size.

Acidanthera murielæ **Fragrant Gladiolus** or **Ethiopian Gladiolus** produces sword-like foliage topped by wonderfully scented star-shaped 2" white flowers with mahogany-purple centers on arching stems. Useful as a garden or cutflower. 24" tall. Culture like gladiolus.

6001*: 10/$2.50;* ***6002****: 20/$4.50;* ***6003****: 50/$10.25*

Anemone coronaria **De Caen mix Anemone** or **Windflower** Charming single flowers 1-3" wide are dark purple-blue, red, rose or white and appear in early summer. Good for borders, containers and for cutting. 8-10" tall. Soak knobby tubers in water 24 hours before planting in early spring, 1-2" deep, 4-8" apart. Anemones enjoy full sun and light sandy soil but must be kept moist during the growing season.

6011*: 10/$2.80;*
6012*: 20/$4.80;* ***6013****: 50/$10.90*

Begonia **x** ***tuberhybrida*** **Tuberous Begonia** Lush textures, intense colors and a tropical aura make this tender temperamental plant well worth the trouble. Velvety flowers bloom all summer, drooping languidly amidst red-tinted foliage. Excellent bedding or container plants. Best in a cool spot with lots of indirect sunlight and air circulation. Moist but not soggy fertile soil. Plant outside, concave side up, 1/2-1" deep and 12-15" apart when night temperatures rise above 50˚ or, for a longer season, start indoors and plant out later. Pinch back to encourage more blooms. The Camellia is Multiflora type and the Hanging is, of course, Pendulous. These are 1 1/2-2" tubers at bargain prices.

Scarlet Double Camellia 12" tall.
6021*: 2/$2.90;*
6022*: 4/$5.00;* ***6023****: 6/$7.20*

White Double Camellia 12" tall.
6031*: 2/$2.90;*
6032*: 4/$5.00;* ***6033****: 6/$7.20*

Yellow Double Camellia 12" tall.
6041*: 2/$2.90;*
6042*: 4/$5.00;* ***6043****: 6/$7.20*

Orange Hanging Basket 2-3' long.
6051*: 2/$3.30;*
6052*: 4/$5.80;* ***6053****: 6/$8.50*

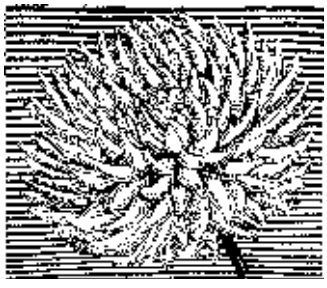
Pink Hanging Basket 2-3' long.
6061*: 2/$3.30;*
6062*: 4/$5.80;* ***6063****: 6/$8.50*

Yellow Hanging Basket 2-3' long.
6071*: 2/$3.30;* ***6072****: 4/$5.80;* ***6073****: 6/$8.50*

Dahlia Bushy bedding plant and cutflower producer blooms from midsummer until frost. Native to hot parts of the Americas and first developed as a food crop, ornamental dahlias are descended from years of breeding and hybridizing *D. pinnata* and *D. juarezi*. Earl Waterman grew all this year's stock at Roadtown Dahlia Patch in Shutesbury, MA. These are large tubers.

D. **Peter's Purple** Tall 4' plants with 6" purple flowers, good for specimens or cuts. "Spectacular, impressive eye-bender," says our modest grower.

6081*: 1/$2.60;* ***6082****: 3/$6.80;* ***6083****: 6/$12.50*



D. **Earl's Cactus Mix** Early bloomers, excellent cut flowers. Cactus-style blooms are same size, 3-4", and shape, but colors are maroon, purple and white. 2-3' tall.

6091*: 2/$4.70;*
6092*: 4/$8.20;*
6093*: 8/$13.90*

D. **Earl's Short Purple Mix** Purple colors range from deep maroon to pinkish-lavender. Flowers, from 1-8", have full-petalled centers ("not dwarf bedding stuff") on plants only 1-2' tall.

6101*: 2/$4.70;* ***6102****: 4/$8.20;* ***6103****: 8/$13.80*

D. **Earl's Tall Mix** Now in its sixth year, includes pink, yellow, light purple, white, red and dark red 3-6" flowers, pompon and decorative (standard) styles, but it will be different varieties from those in last year's mix. Plants 3-4' tall.

6111*: 2/$4.70;* ***6112****: 4/$8.20;* ***6113****: 8/$13.70*

Tender Summer Bulbs
In our climate, these tender spring-planted summer-blooming bulbs, corms and tubers will not survive the winter outdoors. You may dig them up in the fall after foliage dies, dry them and gently brush off soil and debris, store somewhere dark and cool (40-50˚) for the winter in a medium like dry peat or sawdust, and then replant in spring. Or grow them in pots and relocate as the weather dictates. Or treat them as annuals and compost them at the end of the season.

Dahlia Need 3-4 hours per day of direct sun, tolerant of full sun to light shade. Plant 3-4" deep, 12-24" apart. Conventional wisdom says to plant after danger of frost is past, but our grower in Massachusetts plants his the same time as his peas, and stresses the importance of early planting, saying they recover in the rare event that the first foliage is killed by frost. Dahlias often need staking, but close plantings can support each other. Dahlia blooms are susceptible to insect damage, especially in the bud stage. Tarnish plant bugs, leaf hoppers and thrips are all suspect. Think out a control program ahead of time. Keeping the flowers picked keeps some pests down.

Gladiolus Each stalk blooms for about a week, about 8 weeks after planting. Stagger plantings for flowers from summer to frost. Cut when 2-3 flowers have opened, taking care to spare the leaves which feed the developing corm. Plant corms 4-6" deep and 6" apart after the last spring frost. Hilling or staking may be needed if their sword-shaped foliage and 3-4' flower spikes get top heavy. Dig up the corms after the tops have died, discard the old one, clean the new one, dry, and store loose (no peat) in a cool dry place.

Thrips are a problem for glads, and infestations—indicated by yellowing and spotted foliage—are aggravated by water stress. Be prepared lest they devastate your plants and prevent flowering. Research a control program acceptable to you (possibilities include insecticidal soap, garlic, pyrethrum, or rotenone), have it on hand, and use it at the first sign of infestation.

***Gladiolus* Sword Lily** is a showy summer bloomer and excels as a cut-flower. Each 36" tall stalk is covered with 10 or more open funnel-shaped flowers that bloom from bottom to top. Named for the their sword-like leaves; a gladiolus was a small sword in ancient Rome. Gladiolus bulbs are 1 1/2" and up.

***G.* 'Black Jack'** dark maroon.
***6121**: 10/$2.85;*
***6122**: 20/$4.90;*
***6123**: 50/$11.50*

***G.* 'Nova Lux'** rich yellow with a few red lines.
***6131**: 10/$2.85;*
***6132**: 20/$4.90;*
***6133**: 50/$11.50*

***G.* 'Oscar'** intense solid crimson.
***6141**: 10/$2.85;*
***6142**: 20/$4.90;*
***6143**: 50/$11.50*

***G.* 'Pink Friendship'** ruffled pink with yellow-white throat.
***6151**: 10/$2.85;*
***6152**: 20/$4.90;*
***6153**: 50/$11.50*

***G.* 'Praha'** apricot-salmon with yellow throat.
***6161**: 10/$2.85;*
***6162**: 20/$4.90;*
***6163**: 50/$11.50*

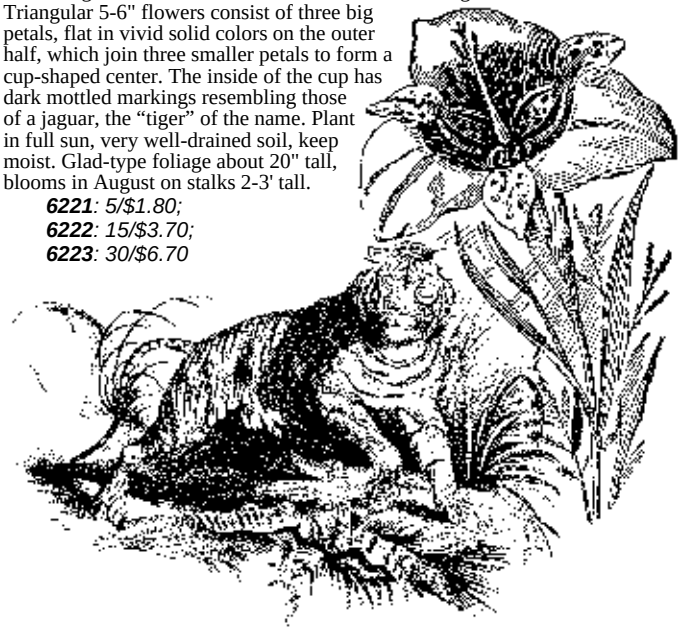
***G.* 'Priscilla'** lavender-rose edge, white center.
***6171**: 10/$2.85;*
***6172**: 20/$4.90;*
***6173**: 50/$11.50*

G. 'Violetta' violet-blue, tall.
***6181**: 10/$2.85;*
***6182**: 20/$4.90;*
***6183**: 50/$11.50*

Large-Flowering Glad Mix
***6191**: 10/$2.50;*
***6192**: 20/$4.50;*
***6193**: 50/$10.50*

Nanus Glad Mix miniature, mixed colors, many bicolors, 24" tall.
***6201**: 10/$3.30;*
***6202**: 20/$6.00;*
***6203**: 50/$13.00*

***Tigridia pavonia* Tiger Flower Mix** This is an impulse listing. I wanted something new here and saw these in bloom and thought, Wow! Cool! Triangular 5-6" flowers consist of three big petals, flat in vivid solid colors on the outer half, which join three smaller petals to form a cup-shaped center. The inside of the cup has dark mottled markings resembling those of a jaguar, the "tiger" of the name. Plant in full sun, very well-drained soil, keep moist. Glad-type foliage about 20" tall, blooms in August on stalks 2-3' tall.
***6221**: 5/$1.80;*
***6222**: 15/$3.70;*
***6223**: 30/$6.70*



Herbaceous Perennial Plants

Most of the perennial plants we offer are hardy at least into Zone 4. USDA hardiness zone (chart on page 3) follows each description. The list is alphabetized by botanical names, in italics, followed by common names. Except for the collection, each selection is offered in three different quantities; note the different item number for each package size.

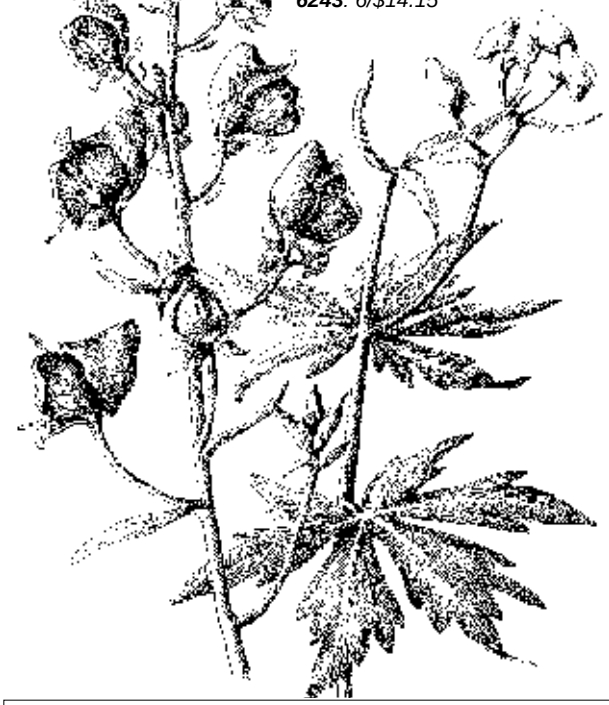
Beginner's Collection

If you give them a sunny bed of ordinary well-drained soil you will have an interesting mix of foliage from spring through fall and colorful and varied flowers throughout at least July and August. Yellow coreopsis, lavender or pink Monarda (beebalm), blue Echinops ritro (globe thistle), golden Stella d'Oro Hemerocallis (daylily), and white Phystostegia (false dragonhead). All tend to spread and each has a distinctive foliage, habit and blossom. A good way to become acquainted with some basic easy-to-grow perennials or to jump-start a border that needs help. One collection will fit 8-10 square feet for a year or two and then begin to spill over. Should a variety be unavailable, we will substitute a comparable one. Z3.

***6231**: 1 collection/$14.75*

***Aconitum napellus* English Monkshood** or **Friar's Cap** produces dense showy spikes of deep violet-blue helmet-shaped flowers above elegant palmate foliage in late summer. Plant in a partially shaded, cool and moist location for longest-lasting flowers. An excellent cutflower—cut when 1/3 to 1/2 the spike is in bloom. Grand delphinium-style blooms rarely need staking. It's amusing to watch bumble bees climb under the hood and completely disappear into the flowers. The entire plant is poisonous; wash your hands after handling or cutting. 36-40" tall. Plant 15-20" apart in moist soil. Z3.

***6241**: 1/$2.90;*
***6242**: 3/$7.50;*
***6243**: 6/$14.15*



Bare-Root Perennial Stock

Treat bare-root perennials like tender annuals for their first growing season, when they typically focus on root growth. Once established, usually in the second year, they are vigorous and floriferous.

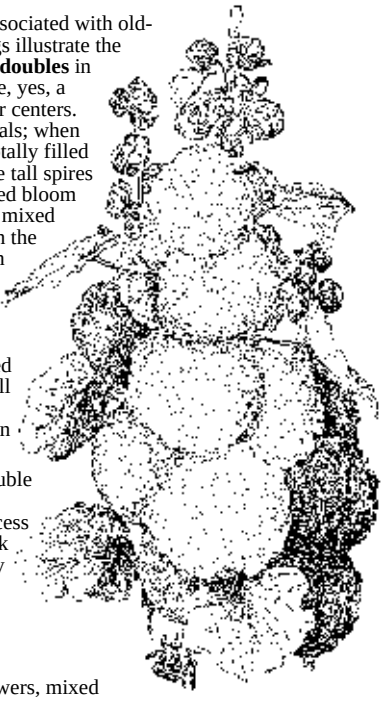
When you receive your order, open the bags and check the stock immediately. Roots and crowns should be firm and pliable, not soft or brittle. If they are slightly dry, add a little water or, if they are going to be potted up soon, soak the roots. Generally, a little surface mold is harmless and will not affect the plant's future performance. If you cannot pot them up immediately, store them in a cool (35-40˚) location for a short time.

Pot up the roots in well-drained potting mix. Most plants need a deep 6" pot or a 1-gallon container. Avoid coiling the roots in the bottom of undersized containers. Grow newly potted perennials for a few weeks in a protected location in indirect light at 50-60˚ and keep them from freezing. Wet and/or cold conditions for an extended period may cause rotting. Begin feeding when new growth appears. Keep dry fertilizers away from plant crowns. Animal manures should be used with caution as they can promote fungal and bacterial diseases.

Transplant out after danger of frost, once they show some top growth. Dig a hole about twice the size of the pot, loosening the surrounding soil and adding compost or fertilizers as necessary. Generally, plant the top of the crown just below ground level, less than an inch from the surface of the soil.

Nearly all perennials appreciate a fall mulch and a sidedressing of compost or leaf mold in the spring.

***Alcea rosea* Hollyhock** is associated with old-fashioned gardens. Our offerings illustrate the difference between **singles** and **doubles** in garden-talk. Single flowers have, yes, a single row of petals around their centers. Doubles have *many* rows of petals; when we say fully double we mean totally filled with petals. Hollyhocks produce tall spires of big round flowers for extended bloom through July and August. Their mixed colors range from white through the pinks into rose and maroon with an occasional yellow or salmon. Officially perennial, they can be short-lived, and are best cultivated as a biennials which readily self-sow once established in favorable conditions. Like full sun. Wind protection or staking is essential. Plant 12-18" apart in moist well-drained soil. Z3.



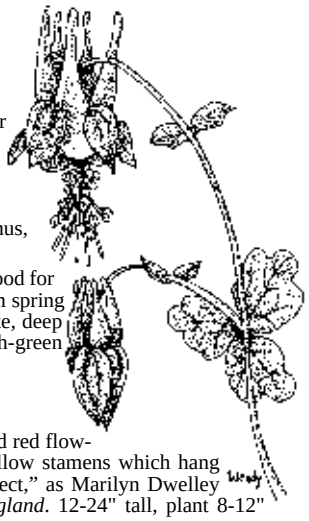
***A. r.* 'Powderpuffs'** Fully double hemispherical flowers in mixed colors provide a spectacular excess of bloom. The biggest hollyhock flower available. Comparatively short at 4-5'.

***6251**: 1/$3.40;*
***6252**: 3/$8.70;*
***6253**: 6/$16.20*

***A. r.* 'Singles Mix'** Single flowers, mixed colors including roses, pinks, maroons, whites. MOFGA-certified organically grown. 6' tall. **ME Grown.**

***6261**: 1/$3.60;* ***6262**: 3/$9.10;* ***6263**: 6/$16.80*

***Aquilegia* Columbine** In early spring round-lobed leaves form little stacks which unfurl prettily when little else is green. Not long after, flowers atop vertical stems dance above the foliage displaying their characteristic prominent five spurs. Good for cutting garden or border. Foliage dwindles in summer heat so it makes room for late-bloomers. Tolerates full sun but prefers partial shade which prolongs the flowering season. Plant in light soil with adequate humus, moisture and drainage. Z3.

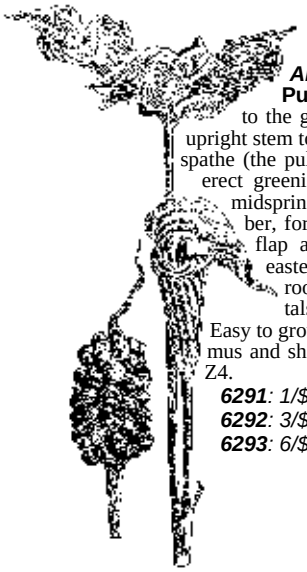


***A.* x 'Biedermeier'** Neat compact habit, good for front of border or rock garden. Flowers from spring into summer in mixed colors including white, deep pink, lilac, purples and blues. Pretty bluish-green foliage. Plant 6-12" apart. 8-10" tall.

***6271**: 1/$2.80;* ***6272**: 3/$7.25;*
***6273**: 6/$12.50*

***A. canadensis* Wild Columbine** Spurred red flowers are highlighted by noticeable bright yellow stamens which hang below the petals and "give a jewel-like effect," as Marilyn Dwelley says in her *Spring Wildflowers of New England*. 12-24" tall, plant 8-12" apart. Nursery propagated from native plants.

***6281**: 1/$2.80;*
***6282**: 3/$7.25;*
***6283**: 6/$12.75*



***Arisaema triphyllum* Jack-in-the-Pulpit** One or two compound leaves close to the ground, each with three leaflets frame an upright stem topped by a tannish-purple 3" long cuplike spathe (the pulpit) which contains and arches over the erect greenish-yellow spadix (Jack) and appears in midspring. It's a great pleasure, one I still remember, for the two- or three-year-old set to lift the flap and see Jack. Wildflower native to the eastern U.S. Native Americans used the dried root medicinally, but calcium oxalate crystals in the fresh plant are intensely irritating. Easy to grow in moist woodsy soil with plenty of humus and shade. About 12" tall. Nursery propagated. Z4.

***6291**: 1/$2.90;*
***6292**: 3/$7.50;*
***6293**: 6/$13.75*

ME Grown = grown in Maine by a member of the Fedco growers coop

***Artemisia dracunculus* var. *sativa* 'Tarragon' French Tarragon** really is culinary tarragon, the flavoring with a hint of anise well known for its use with vinegar, salads, poultry and fish. Bushy, with long narrow grey-green leaves, looks like a small shrub in my border, where it thrives despite neglect. 18-40" tall. Easy to grow, especially in poor dry soil, full sun. Needs good drainage and some use a winter mulch. Z4.

***6301**: 1/$3.50;*
***6302**: 3/$9.00;*
***6303**: 6/$17.00*

***Aster* Starwort** or **Frost Flower** are familiar summer and fall wildflowers throughout the nation. These varieties are selected for outstanding color and form but are still robust and easy to grow. Flowers provide great displays in fall, attract butterflies and beneficial insects, and last long, long in the vase. Plant singly, group in the border, or naturalize in meadows or on banks. Cut back slightly in early-mid June to induce an abundance of $1^1/_2$-2" rayed blooms from late August into October. Asters are at their peak when most plants have faded. Plant 12-18" apart in light moist humusy soil in full sun with good air circulation. Z4.

***A.* x *frikartii* 'Mönch'** very long-lasting lavender-blue flowers with yellow disks, upright plant, 28" tall.

***6311**: 1/$3.50;* ***6312**: 3/$9.00;* ***6313**: 6/$16.80*

***A. novae-angliae* 'Alma Potschke'** surprising wonderful intense salmon-rose, 30-36" tall.

***6321**: 1/$3.50;* ***6322**: 3/$9.00;* ***6323**: 6/$17.00*

***A. novi-belgii* 'Alert'** deep crimson-red semi-double flowers in a mound 12-15" high.

***6331**: 1/$3.50;* ***6332**: 3/$9.00;* ***6333**: 6/$16.90*

***Astilbe* Feather Flower, Goatsbeard** or **False Spirea** lends a novel touch to the border but is easy to grow, hardy and long-lived. Long-lasting plumy feathery flowers are good for drying and provide a welcome contrast to more ordinary petaled blossoms. Elegant fern-like foliage forms an attractive clump all season and comes in a wide range of sizes and shades. Convention holds Astilbe to be a partial-shade plant that absolutely requires a moist humusy acid soil when grown in full sun. That's true in warmer areas, but in central Maine it seems to like full sun in a wide range of conditions. Blooms July and August. Stock has 2-3 "eyes." Plant 12-18" apart and divide clumps every few years.

***A.* x *arendsii* 'Amethyst'** Tall open lavender plumes, medium-green leaves, Mid-late season. 32-40" tall. Z3.

***6341**: 1/$2.90;* ***6342**: 3/$7.50;* ***6343**: 6/$13.80*

***A.* x *a.* 'Bridal Veil'** Airy large white panicles evoke snow or fog, for our Maine grower; it reminds those "from away" of lace. A bed of these nodding plumes forms a striking white mist. Open clumps of medium-green foliage around 18" tall, plumes to 36" tall. Early-mid season. Z3. **ME Grown.**

***6351**: 1/$2.90;* ***6352**: 3/$7.50;* ***6353**: 6/$13.90*

***A. simplicifolia* 'Hennie Graafland'** Glowing rose-pink flowers described as "unnaturally bright, catch the eye across the garden." Tight clusters loosen after a while. Finely cut shiny small very dark bronze-green foliage "looks like a fern bed" after the spent blooms are cut. Mid-late season. 16" tall. Z4. **ME Grown.**

***6361**: 1/$2.90;* ***6362**: 3/$7.50;* ***6363**: 6/$13.80*

Convallaria majalis
Lily of the Valley is a hardy bedding or border plant and an excellent ground cover, even for dry shade. Perennial favorite and a top-seller for all 17 years that we've listed it. Easy to grow under any conditions, prefers partial to full shade. Produces long stems of bell-shaped fragrant white flowers in late spring-early summer, followed by small orange berries. Their intense fragrance and delicate shape add welcome notes to bouquets. Plant pips 2" deep, 3-5" apart in rich moist soil. 6-8" tall. Z2.
***6371**: 5/$3.00;*
***6372**: 10/$5.20;*
***6373**: 25/$12.10*

***Coreopsis* Tickseed** Let's not call it Tickseed, let's call it Coreopsis (ko-ree-OP-sis) even though that name alludes to its seed resembling a tick (*koris*, in Greek). These tough long-lasting plants with intense golden yellow flowers are excellent for cutting and attract and support beneficial insects. They tend to spread—a benefit in unkempt gardens—but are easy to dig out if they're in the way. Like full sun, tolerate drought and thrive in most conditions. Easy to grow. Plant crowns 12-18" apart.

***C. grandiflora* 'Early Sunrise'** Brilliant golden-yellow semi-double 2" flowers bloom all summer long and start a couple of weeks earlier than similar varieties. All-America Award winner. 18" tall. Z3.
***6381**: 1/$3.50;* ***6382**: 3/$9.00;* ***6383**: 6/$16.90*

***C. verticillata* 'Zagreb' Thread-leaf Coreopsis** Small bright yellow-gold flowers sprayed throughout an airy clump of needle-like foliage. 'Moonbeam'-type habit, only shorter. Good for edging, rock gardens 15" tall. Z3.
***6391**: 1/$2.90;* ***6392**: 3/$7.50;* ***6393**: 6/$13.00*

***Delphinium* 'Pacific Giant' Mixed Delphinium** Once again we are pleased to offer marvelous temperamental full-sized delphiniums. Pacific Giant is a hybrid series that includes some favorite cultivars like Summer Skies, Black Knight, Guinevere, King Arthur, Blue Jay—in other words, the big delphiniums you have seen and coveted. Lush flower spikes bloom in midsummer, covered with small flowers whose outer petals and inner sepals often contrast in color. When plants are established, flower spikes can be over 6' tall and arise from a waist-high clump of pinnate glossy green foliage. The catch is that they demand *very rich moist* well-drained soil. I sidedress mine with compost in spring and fall and whenever I am foliar feeding anything in the garden I give the delphiniums a few squirts. They also need staking (the trick is to stake *before* they fall down) because they are in their heavy-blooming glory right when we have our most intense windy summer thunder and hail storms. Plant 18-24" apart in highly fertile non-acid loam in full sun or light shade. MOFGA-certified organic stock. Z3. **ME Grown.**
***6401**: 1/$3.75;* ***6402**: 3/$9.80;* ***6403**: 6/$18.50*

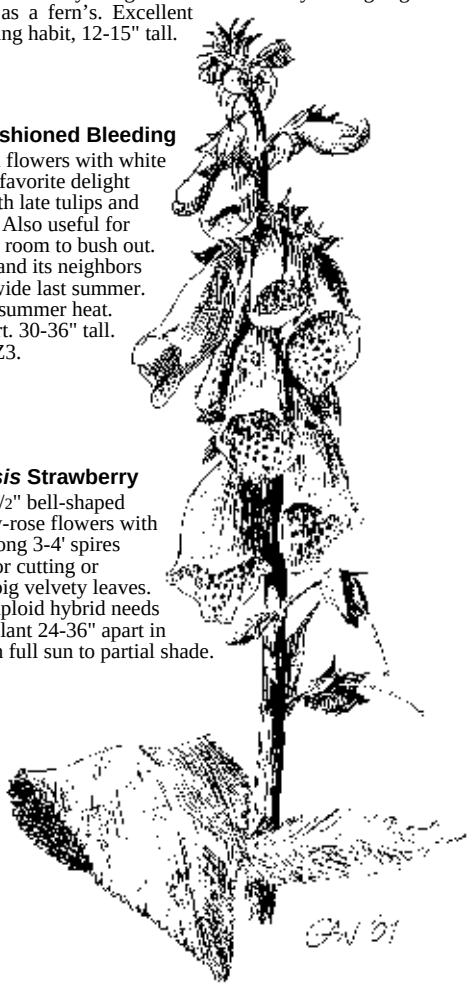
***Dicentra* Bleeding Heart** Graceful racemes arch above and beside clumps of attractive cut foliage. Distinctively shaped flowers dangle in a row on each raceme like charms on a bracelet. Hardy long-lived plant when it gets rich moist soil and partial shade. Z3.

***D. cucularia* Dutchman's Breeches** White yellow-tipped flowers look like so many tiny pantaloons hanging above very finely cut foliage. Blooms with the daffodils and makes a wonderful accent in an early spring garden. An ephemeral: whole plant dies down after flowering; tubers remain dormant until the following spring. Native eastern wildflower, rescued from sites about to be developed and nursery propagated. 8-12" tall.
***6411**: 1/$2.90;* ***6412**: 3/$7.50;* ***6413**: 6/$14.25*

***D. formosa* 'Luxuriant' Western Bleeding Heart** Blooms all summer and tolerates heat and drought better than any other *Dicentra*. Cherry red flowers defy the elements as they dangle above lush finely-cut light green foliage which is pretty as a fern's. Excellent border plant with spreading habit, 12-15" tall.
***6421**: 1/$4.20;*
***6422**: 2/$7.25;*
***6423**: 3/$10.20*

***D. spectabilis* Old-Fashioned Bleeding Heart** Pink heart-shaped flowers with white detail on this old garden favorite delight every spring. Blooms with late tulips and complements them well. Also useful for cutting. Prefers plenty of room to bush out. Mine surprised both me and its neighbors when it became over 6' wide last summer. Foliage may die back in summer heat. Plant 2-4" deep, 24" apart. 30-36" tall. Our stock has 2-3 eyes. Z3.
***6431**: 1/$3.00;*
***6432**: 3/$7.80;*
***6433**: 6/$14.50*

***Digitalis* x *mertonensis* Strawberry Foxglove** Pendulous $2^1/_2$" bell-shaped copper-tinged strawberry-rose flowers with spotted throats dangle along 3-4' spires June till August. Good for cutting or border. Basal rosette of big velvety leaves. Large true-breeding tetraploid hybrid needs dividing every 3 years. Plant 24-36" apart in moist slightly acid soil in full sun to partial shade. Z4.
***6441**: 1/$3.50;*
***6442**: 3/$9.00;*
***6443**: 6/$17.00*



***Echinacea purpurea* 'White Swan' Coneflower** has bright 4-5" daisy-like blooms with graceful reflexed white petals and large fascinating quilled copper-yellow centers undercolored with green. Great grouped in a border or on a slope. Long-lasting cutflower blooms from July to September and attracts butterflies. Likes full sun and sandy loam, and tolerates wind, heat and drought once established. 30-36" tall. Plant 20-30" apart in light soil. Also see Purple Coneflower, *E. purpurea*, **#7121** in the Medicinals Section. Z3.

***6451**: 1/$3.25;* ***6452**: 3/$8.50;* ***6453**: 6/$16.05*

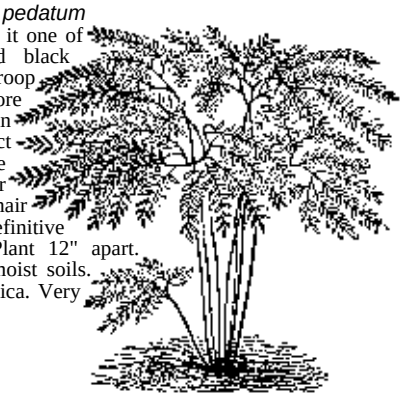
***Echinops ritro* Globe Thistle** Spherical 2" spiny pale steel-blue flowers are great for fresh or dried flower arrangements. At first, flowers look like maces, covered with "metal" spikes, then they gradually sprout airy fine blue petals. Fun to watch in the garden or the vase. Good for accent or rear of border, and low-maintenance gardens. Robust thistly foliage keeps weeds (and neighboring perennials) at bay. Makes an interesting contrast to daylilies. Blooms in July and August. Tolerates drought. 24-48" tall. Easy to grow. Plant 12" apart in well-drained light soil in full sun. Z3. **ME Grown.**

***6461**: 1/$3.00;*
***6462**: 3/$7.50;*
***6463**: 6/$14.00*

Lady Fern *Athyrium filix-femina* tolerates more sun and drier soil than most ferns. Spreads easily in moist soil from falling spores. Works as a foundation planting on the shady sides of my house. Graceful bright green fronds are twice compound with very numerous leaflets resulting in a fine-textured classic fern appearance. Many variant forms, a few taller than 4' but most are under 2'. Z3.

***6491**: 1/$3.00;* ***6492**: 3/$7.00;* ***6493**: 6/$13.50*

Maidenhair Fern *Adiantum pedatum*
Delicate whorled form makes it one of my favorite ferns. Polished black stems curve up and then droop toward the ground with more narrow black stems growing in arches from them. Tiny distinct ginkgo-like green leaves line every stem. I think maidenhair fern is named after maidenhair tree but continue to seek definitive information on this topic. Plant 12" apart. Likes semi-shade or shade, moist soils. Native to eastern North America. Very hardy. Z2.



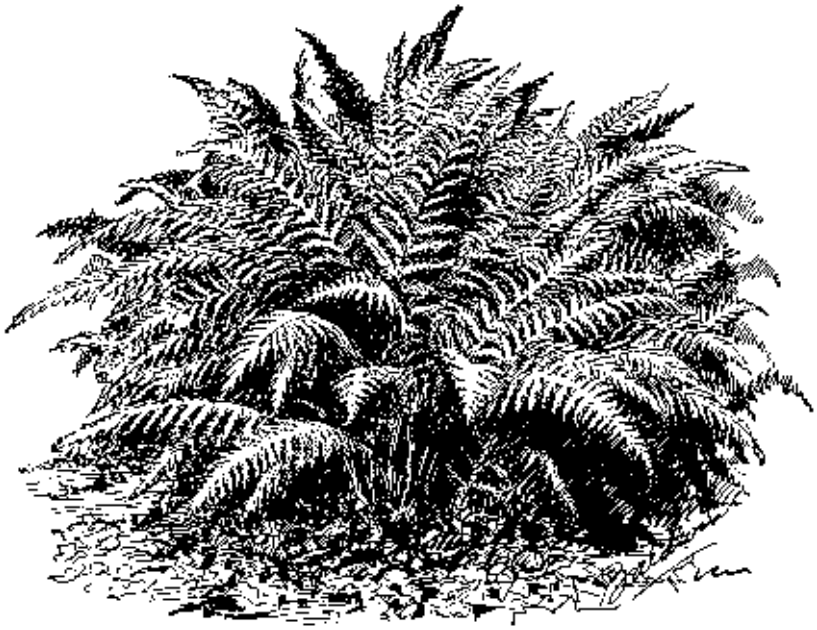
***6501**: 1/$3.50;*
***6502**: 3/$9.00;*
***6503**: 6/$16.50*

Ostrich Fern *Matteuccia struthiopteris* is a delicately textured bright green deciduous fern with a golden hue in the light. Frond tips curl like ostrich feathers. Likes open shade, woods and wet banks. Tolerates full sun in swampy areas. One of the largest hardy ferns, 3-7' tall, and spreads by underground runners, so give it room. Native to Europe, but well established and welcome in North America. Z2.

***6511**: 1/$3.50;* ***6512**: 3/$9.00;* ***6513**: 6/$16.50*

Ferns One summer day long ago, I drove a friend from down south around Maine. "What magnificent beautiful ferns!" she kept exclaiming. Until that day, they were merely plants on the side of the road to me. Since then I've always noticed what lush roadside fern displays we enjoy in Maine several months of the year.

Ferns are flowerless spore-producing perennials represented by over 10,000 species worldwide, ranging from 70' tropical tree ferns to teeny plants sprouting from cracks in alpine rock. Several make wonderful low-maintenance foliage plants that thrive in moist woodsy humus-rich soil and lend a serene aura to a shady garden or landscape. Mulch if necessary to keep crowns from drying out.

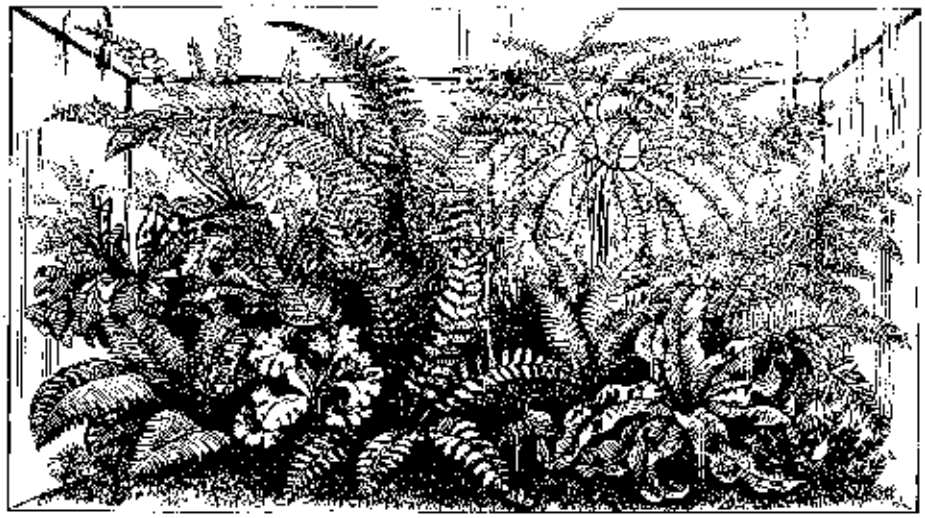


Christmas Fern *Polystichum acrostichoides* remains evergreen in warmer zones, widely used for Christmas cut greenery. Shuttlecock of fronds with ladder-like parallel leathery dark green leaves is partially evergreen in our climate and provides good fall interest and emerges in very early spring to combine well with woodland flowers. Moist acidic soil, light shade, tolerates sun with sufficient moisture. Plant 2-3' apart. 18-24" tall. Northeastern native. Z3.

***6471**: 1/$3.00;* ***6472**: 3/$7.00;* ***6473**: 6/$13.50*

Japanese Painted Fern *Athyrium niponicum* 'Pictum' is the most decorative fern I know; mine still thrills me. Soft grey-green background with purplish wine-red stems and markings, accented by silvery-grey highlights. Needs partial shade, moist soil. Deciduous. 8-18" tall with spreading habit. Plant 10-12" apart. Z3.

***6481**: 1/$4.80;* ***6482**: 2/$8.20;* ***6483**: 3/$11.90*



Royal Fern *Osmunda regalis* also attains giant proportions and, as one of the showiest garden ferns, makes a striking focal point on a waterside or in a woodland. Soft and wavy deciduous lance-shaped light green fronds can reach 3' long. Sometimes called **Flowering Fern** because some of the fronds have brown spore cases on their tips which lend a decorative tassel-like appearance. Slow-growing plant gets to be 6' tall and over 9' wide in humus-rich moist-to-wet soil. Evolutionarily speaking, *Osmunda* is one of the oldest plant genera, native to North and South America and Asia. Some Royal Fern individuals are said to be 1000 years old. Z3.

***6521**: 1/$3.50;*
***6522**: 3/$9.00;*
***6523**: 6/$16.75*

***Helianthus* Perennial Sunflower** Easy-to-grow "bombproof" vigorous upright plant covered with golden-yellow flowers from late July until frost. Over 5' tall, good for the back of the border or an informal accent. Bennett Verbeck grew these and no one is sure of their variety, but the 4" blossoms have a single row of petals around a large prominent tufted center—looks very similar to 'Morning Sun'. Good for cutting. Will spread in full sun and moist well-drained soil. Plant 24" apart. Grown without chemical fertilizers, pesticides or herbicides. Z3. **ME Grown.**

***6531**: 1/$3.00; **6532**: 3/$8.00; **6533**: 6/$14.50*

Helleborus orientalis
Hellebore or **Lenten Rose** Mysterious and slightly sinister, evergreen in all but the coldest climates and blooming in winter or very early spring, hellebore was named by the ancient Greeks and is native to the chalky soils of Macedonia, Asia Minor and the Caucasus. Mentioned in English as early as 1400 as having poisonous and medicinal properties, specifically for mental disease. Looks like a small shrub, 15-18" tall, with leathery green leaves palmately divided into many lobed leaflets. Saucer-shaped flowers, 2-3" across, appear in very early spring, last up to eight weeks, and vary in color from white and greenish-white to pink. Likes dappled shade and neutral to alkaline soil with plenty of organic matter and good drainage, but *H. orientalis* is the easiest of the genus to grow and tolerates a wide range of conditions. Will self-sow when content. Does not like to be disturbed and is dormant in summer. *Caution: all parts of the plant are poisonous.* Z4, possibly Z3.

***6541**: 1/$5.75;*
***6542**: 2/$9.90;*
***6543**: 3/$13.80*

***H.* 'Autumn Red'** Intense mahogany brick red with a thin yellow stripe down the middle of every other petal. Glowing orange-yellow throat. Mid to late season. 24-42" tall. Locally grown at Entwood Nursery. **ME Grown.**

***6561**: 1/$3.40; **6562**: 3/$8.70; **6563**: 6/$15.75*

***H.* 'Catherine Woodbury'** Blushed light lilac-pink blends into soft yellow-green throat, free-blooming midseason diploid. Tall beautiful fragrant award-winner. Sales are beginning to dwindle—maybe everybody has one?—but I can't bear to drop this gorgeous cultivar. 30-50" tall.

***6571**: 1/$3.40;*
***6572**: 3/$8.70;*
***6573**: 6/$15.75*

***H.* 'Ice Carnival'** Tall, very light yellow—almost white—with yellow-green throat. Cool shimmering color caught my eye on a sticky summer visit to Entwood Nursery where Ernie and Bianca say that the fragrant big 6" flowers glow in the moonlight. Extended bloom, mid-season. Clumps 28" tall. **ME Grown.**

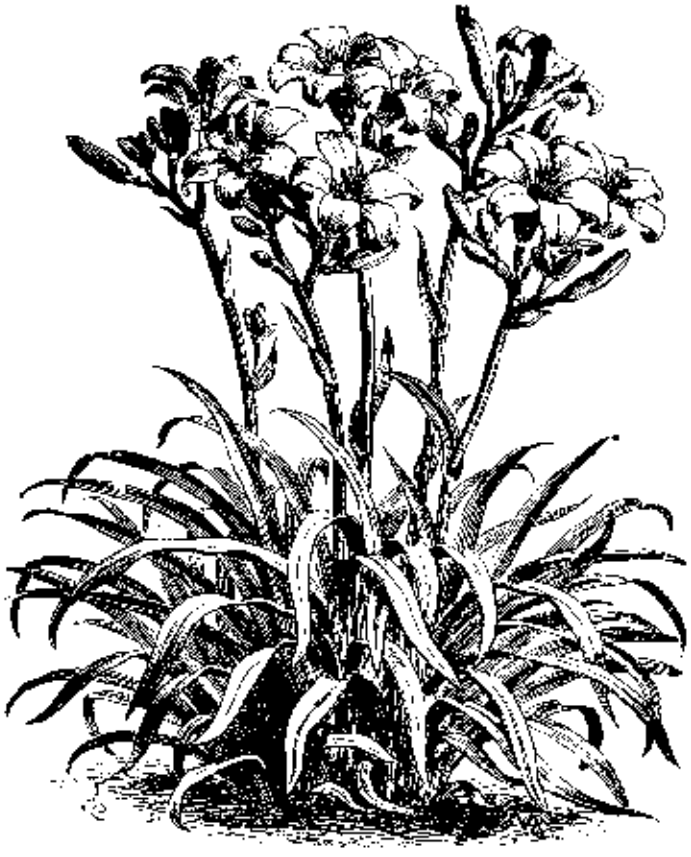
***6581**: 1/$4.50;*
***6582**: 2/$7.75;*
***6583**: 3/$10.75*

***H.* 'Pandora's Box'** Creamy white petals with bright reddish-purple eye zones and a green throat make Pandora's Box one of the more sensational recent introductions which is a great color combination with 'Siloam Bye Lo'. 4" flowers all summer on vigorous plant with a compact habit. 20" tall.

***6591**: 1/$4.75;*
***6592**: 2/$8.50;*
***6593**: 3/$11.50*

***H.* 'Siloam Bye Lo'** What a color! Rose with hints of both purple and orange that result in peachy-mauve rose. Color intensifies in eyezone and is highlighted by a yellow-green throat. Lightly ruffled 3¼" blossoms are almost round. Scapes have candelabra-type branches and, like all Siloams, many buds on each. 24" tall. Grown at All Weather Farm without chemical fertilizers, pesticides or herbicides. **ME Grown.**

***6601**: 1/$5.90; **6602**: 2/$11.00; **6603**: 3/$15.25*

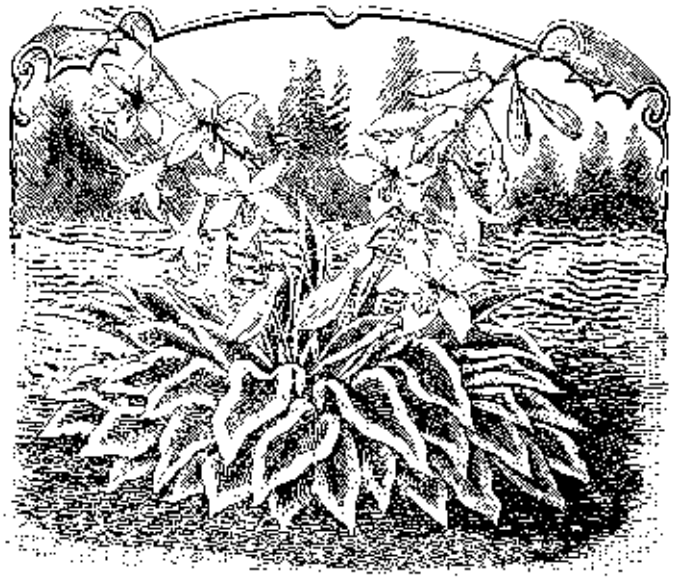


***Hemerocallis* Daylily** produces a bush of narrow arched leaves topped with lily-shaped flowers from July to September and is the champion low-maintenance perennial. *Hemerocallis* means *beautiful day*, *day* referring to the fact that each flower lasts only a day, but since each scape is covered with buds, bloom periods can be extensive and the long stems work well in bouquets. Very hardy, flourishes under a wide range of conditions, from full sun to shade, wet to dry. Trouble-free, chokes out weeds. For foundation planting, terrace, brookside, wild garden or border. Plant 12-18" apart in average soil; however daylilies, like almost everything else, benefit from a shovel or two of compost. Of the over 40,000 registered cultivars, approximately 13,000 are still in circulation, with hundreds of new ones added each year so deciding what to list is always a challenge.

If we run out of local supplies, where applicable, we will provide the same variety commercially grown. Z2.

***H. flava* Lemon Lily** or **Custard Lily** When you see the first daylilies of the season blooming by old houses, they're probably yellow and probably Lemon Lilies. Clear bright yellow star-shaped flowers. Old variety with a tart lemony scent. 24" tall.

***6551**: 1/$3.20; **6552**: 3/$8.00; **6553**: 6/$14.50*



Hosta has bold foliage in orderly mounds with dependable sprays of fragrant bell-shaped flowers on tall stalks. Valuable and cherished low-maintenance border plant and shade-loving ground cover spring to frost. Formerly called **Plantain Lily** or **Funkia** but I have never heard either name. A friend described them as "so architectural!" Several gardeners my age have remarked to me, while admiring a fine planting of hostas, "I didn't used to like them, but now I see how great they are." With their varying colors, textures and clump sizes, hostas alone under trees can make an interesting woodland garden. Folks seem to share my predilection for large cultivars so I am continuing to list them. Hostas tolerate a wide range of soil conditions, but need moisture. Their blue and variegated leaves develop best color in shade. Deep shade gives fewer flowers. Plant 2-4' apart in rich soil with adequate humus. Divide every 4-5 years, or disturb clumps as little as possible; they improve with age as they spread and establish. Z3.

H. fortunei **Aureomarginata** Deep olive-green leaves have distinct veining and a yellow edge (*aureus* means golden-yellow). Lilac flowers on 24" scapes in August. 18-24" tall clump. Two-for-one sale.

6611*: 2/$3.00;* ***6612****: 6/$7.75;* ***6613****: 12/$14.50*

H. f. **'Francee'** Narrow white margins contrast distinctly and neatly with green heart-shaped leaves. Lavender flowers in midsummer. Award winner is about 20" tall with scapes to 36".

6621*: 1/$3.00;* ***6622****: 3/$7.75;* ***6623****: 6/$14.25*

H. **'Royal Standard'** Just plain deep rich glossy green ribbed foliage. Fragrant white flowers in late summer on scapes reaching to 40". Tolerates sun and drought. Clumps around 20" tall. Two-for-one sale.

6631*: 2/$3.75;* ***6632****: 6/$8.50;* ***6633****: 12/$16.25*

H. sieboldiana **'Elegans'** sets the standard for big blue Hostas. Glaucous heart-shaped rounded grey-green leaves can be a foot wide and have wonderful thickness, texture and puckering. Additionally valuable because it tolerates dry shade. White flowers. 24-36" tall clump.

6641*: 1/$3.40;* ***6642****: 3/$8.70;* ***6643****: 6/$15.75*

H. s. **'Frances Williams'** Outstanding cultivar often called the best hosta. Leaf interiors rich blue-green with a wide variable golden-yellow edge. Clumps around 36" high. White flowers on shortish slightly pendant stalks harmonize with the foliage rather than stand above it.

6651*: 1/$3.40;* ***6652****: 3/$8.70;* ***6653****: 6/$15.85*

H. **'Sum and Substance'** Huge rounded chartreuse-green very thick seersuckered leaves become more golden in sunlight. Popular award winner has very pale lilac flowers on leaning scapes. Said to have good slug resistance. Clumps become very large: to 36" tall and 60" across.

6661*: 1/$3.50;* ***6662****: 3/$9.00;* ***6663****: 6/$16.25*

Iris **spp.** comprise a vast genus characterized by beauty, six-petaled flowers (three **standards** above and three **falls** below) and sword-like foliage. We're offering two bearded varieties this year, after a long hiatus when we could not get acceptable stock.

Since the species we offer divide into two general kinds which need different culture, at the risk of being botanically incorrect, here is how I sort out their differences. All that we list are rhizomatous, meaning that they have roots instead of bulbs. (Fedco Bulbs lists some bulbous iris for fall planting.) A useful division within the rhizomatous iris is between **bearded**, where the "beard" is little hairs on the center of each fall petal, and **beardless** where the petals are smooth. The difference for cultivation is bearded iris have a cylindrical tuber-like root from which more ordinary long roots grow. This "tuber" likes to sit on the soil surface so that only a half to a third of it is in the soil and the beardeds cannot tolerate standing water or damp foliage from being crowded with weeds. They need excellent drainage and enjoy a hot exposed location. Whereas the beardless (Japanese and Siberians are the ones we list) have a woody crown from which long roots grow; they like a lot of moisture and can tolerate some standing water and cooler locations.

I. **Dwarf Bearded Iris** are short early-blooming versions of tall bearded iris, what most of us think of as "regular" iris. Their complex parentage involves *I. germanica* and they are sometimes called **German Iris**. We are delighted to have local sources for stock, but supplies may be limited. We are not sure of a hardiness rating. Definitely Zone 4 and I would try them in Zone 3.

I. **'Cherry Gardens'** "Looks like burgundy velvet with a deep tinge of red like a dark red wine." Blooms very early, around Mother's Day here in a warm spring. 16" tall. **ME Grown.**

6681*: 1/$3.50;*
6682*: 3/$9.00;*
6683*: 6/$16.25*

I. **Ruby Massé** Extremely dark purple so electric and vibrant that our growers reported seeing it glowing from a distance through foliage when it bloomed in early June. Fragrant. A great multiplier; we refer to it after the woman who gave it to all her East Vassalboro neighbors, one of whom gave it to me. 18-20" tall. **ME Grown.**

6691*: 1/$3.50;* ***6692****: 3/$9.00;* ***6693****: 6/$16.25*

I. ensata **Japanese Iris Mix** Immense flat blooms in late June and July hover above graceful clumps of arching narrow leaves. Petals are wider than those of any other iris and float mysteriously on a horizontal plane. Wonderful in the border, around ponds or streams. Requires ample moisture during active growth and flowering, not as much moisture other times, but must not dry out. Somewhat tricky to grow. Often takes 2 years to establish, then is best left undisturbed. Plant 10-12" apart in slightly acid soil, in full sun or partial shade. Mix includes white and shades of blue, lavender and violet. 36" tall. Z4.

6671*: 1/$3.70;* ***6672****: 3/$9.50;* ***6673****: 6/$17.75*

I. sibirica **Blue Siberian Iris** produces delicate flowers of deep rich blue on thin stems excellent for cutting. Blooms in late June. Group in border or naturalize in colonies to show off tall slender foliage that looks good all summer. Tolerates most conditions, but performs best in rich moist acid soil. Plant 12-15" apart in full sun or partial shade. Give them room to spread, and divide clumps every few years. This blue is grown at Entwood Nursery and is worth listing season after season because it is outstanding in so many ways: vigor, hardiness, depth of color, number of blossoms, graceful foliage habit. Probably is 'Caesar's Brother' and that is what we'll substitute if we run out of locally grown stock. 42" tall. Z3. **ME Grown.**

6701*: 1/$3.25;*
6702*: 3/$8.50;*
6703*: 6/$16.00*

Lavandula angustifolia
Lavender 'Munstead'
blooms in spires of lavender-blue 15-18" tall flowers treasured for their scent. Valued for dried arrangements, potpourri, herb bundles; nice border, rockery, slope, edging or specimen plant. Aroma soothes the nervous system and perfumes the linen closet. Blooms all summer. Aromatic grey-green lanceolate foliage, bushy habit. Prune woody stems in spring. Likes full sun; demands good drainage. Plant 12-18" apart. Certified organically grown once again by Blessed Maine Herb Co. Z4. **ME Grown.**
6711*: 1/$4.50;*
6712*: 2/$8.00;*
6713*: 3/$11.40*

***Leucanthemum* x *superbum* 'Alaska' Shasta Daisy** (formerly *Chysanthemum* x *superbum*) brightens up any border suffering from mid-summer doldrums. Improvement on the wild daisy which amazes our grower every year with its long bloom time and big flowers. I get reports like, "in full bloom for three weeks and still not flopped over." Starts blooming in mid-July here and still looks decorative in mid-August. White petals in tidy ring around a bright yellow disk, 3-4" flowers excellent for cuts; pick right after they open. Cut down near the ground when it has finally finished blooming and the dark green glossy foliage grows back as a tidy mound. Plant 12-18" apart in full sun to partial shade in well-drained soil. 30-40" tall. Z4. **ME Grown.**
6721*: 1/$3.25;*
6722*: 3/$8.50;*
6723*: 6/$16.25*

***Liatris spicata* Blazing Star** or **Gayfeather** grows stiff dense "bottlebrush" spikes of magenta-purple flowers, from July to September, which open from the top down. Flowers are good for cutting; leave 1/3 of stem on plant. The foliage is fine and grass-like. Hardy, tolerates a broad range of growing conditions, but not drought. Extra moisture must be the reason they are making such an extraordinary display this season. 20-30" tall. Plant 3" deep, 8-12" apart, in well-drained fertile soil. Z3.
6731*: 10/$2.25;* ***6732****: 20/$4.00;* ***6733****: 50/$9.50*

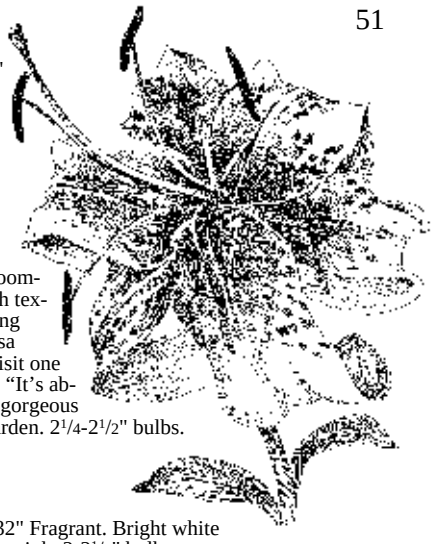
***Lilium* Lilies** The queen of the perennial border, fabulously showy and surprisingly easy to grow. Breeders have been working on them for thousands of years and continue to develop new species and scores of new cultivars every year. It's a confusing terrain, but briefly: **Asiatic** types bloom early, are a bit smaller (under 4'), than Orientals and often have their star-shaped blossoms facing upward. **Oriental** strains tend to be taller (may need staking), bloom later, with their very fragrant and flamboyant blossoms slightly pendant on tiny stems off the main stem. **Trumpets** have long trumpet-shaped blooms, resemble so-called Easter Lilies, are tall and late.

We are offering more low-priced small bulbs in the Asiatics, low prices on big bulbs in the Orientals, premium big bulbs for the stately trumpets and the species martagon lily once again. Excellent as bedding plants or cutflowers, good as specimens or in solid masses, lilies prefer light shade to prolong summer blooms and to keep the bulbs cool. Mulch in full sun. Plant bulbs 6-8" deep, 6" apart in rich well-drained soil, slightly acid with good humus content. Z3.

***L.* 'Monte Negro'** Asiatic, 42" Stir a dab of dark chocolate into fire engine red and you've got the intense deep color of 'Monte Negro'. Early: the first lily to bloom in my garden. Bargain prices on 1 3/4" bulbs.
6741*: 2/$2.30;* ***6742****: 6/$6.00;* ***6743****: 12/$11.00*

***L.* 'Polka'** Asiatic, 22" Apricot-orange with warm red-orange dots. Excellent for containers. Bargain prices on 1 3/4" bulbs.
6751*: 2/$2.50;* ***6752****: 6/$6.25;*
6753*: 12/$11.50*

***L.* 'Vermeer'** Asiatic, 36-40" Shell pink brushed white toward the center. Full disclosure: they looked beautiful in the catalog and Vermeer is my favorite painter. Bargain prices on 1 3/4" bulbs.
6761*: 2/$2.30;* ***6762****: 6/$6.00;* ***6763****: 12/$11.00*



***L.* 'Aubade'** Oriental, 32-36" Fragrant. White with wide yellow-gold band on each petal. Inconspicuous anthers. 2-2 1/4" bulbs.
6771*: 1/$1.70;*
6772*: 3/$4.00;*
6773*: 6/$7.70*

***L.* 'Casa Blanca'** Oriental, 40-44" (but I've seen them blooming from 3-8'). Pure white with textured white specks, and bobbing russet anthers. Nikos saw 'Casa Blanca' in bloom on a trials visit one summer and grabbed my arm; "It's absolutely gorgeous!" They *are* gorgeous and their fragrance fills the garden. 2 1/4-2 1/2" bulbs.
6781*: 1/$2.00;*
6782*: 3/$5.50;*
6783*: 6/$10.75*

***L.* 'Muscadet'** Oriental, 28-32" Fragrant. Bright white blushed and specked with light pink. 2-2 1/4" bulbs.
6791*: 1/$2.10;* ***6792****: 3/$5.75;* ***6793****: 6/$11.00*

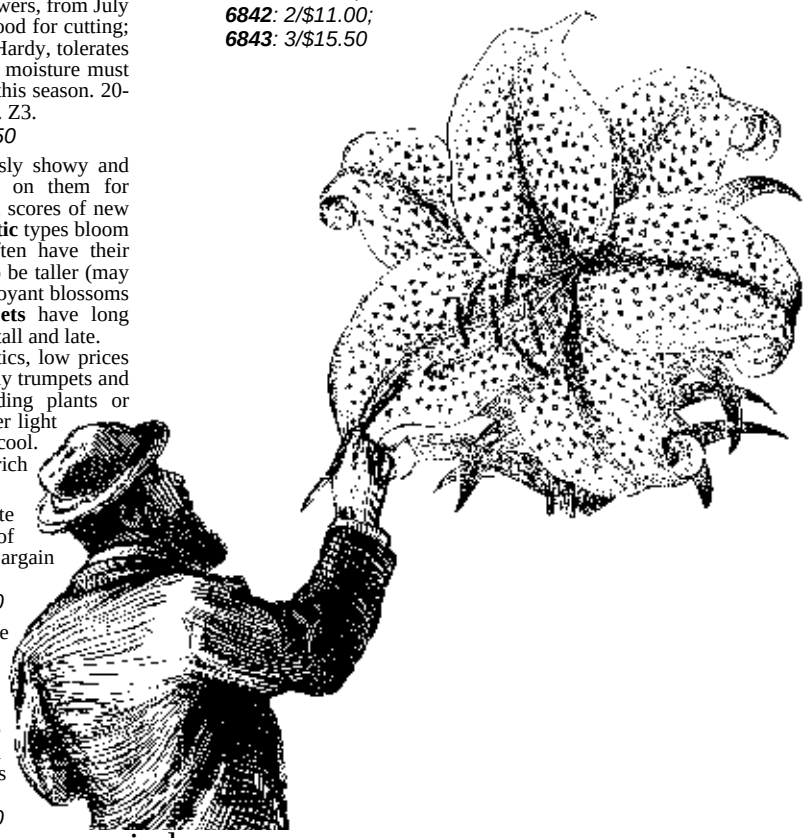
***L.* 'Stargazer'** Oriental, 24-30" Deep rose with white edge, spotted. Fragrant flowers are huge when plants become well established. Continues to be wildly and deservedly popular. Great prices on 2-2 1/4" bulbs.
6801*: 2/$2.00;* ***6802****: 6/$5.50;* ***6803****: 12/$11.00*

***L.* 'Tom Pouce'** Oriental, 24-30" Medium-pink with pronounced inner yellow stripe and dots. Fragrant. Bargain prices on 1 3/4" bulbs.
6811*: 2/$3.00;* ***6812****: 6/$7.50;* ***6813****: 12/$14.25*

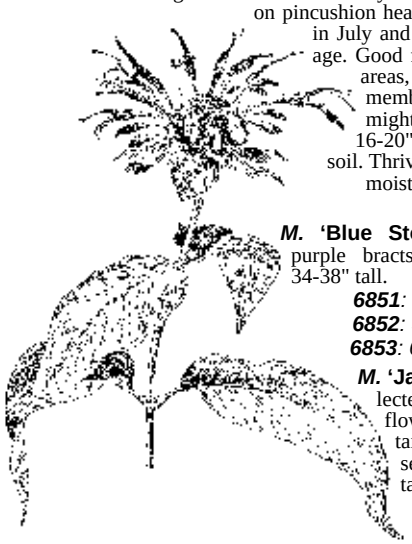
***L.* 'African Queen'** Trumpet, 40" and taller. Tawny light orange with bronze exteriors. Long flowers have somewhat recurved petals. Fragrant and late season. 2 1/2-2 3/4" bulbs.
6821*: 1/$3.00;* ***6822****: 3/$7.50;* ***6823****: 6/$14.25*

***L.* 'Pink Perfection'** Trumpet, 40-60". Deep pink. Fragrant and late season. 2 1/2-2 3/4" bulbs.
6831*: 1/$3.00;* ***6832****: 3/$7.50;* ***6833****: 6/$14.00*

***L. martagon* Martagon** or **Turkscap Lily** True species lily, not widely available, will seed itself and multiply gradually when it is well situated. Long stems covered with up to 40 pendant pinkish-purple flowers with darker flecks on their extremely recurved petals (the Turks' caps) in a lengthy midseason display. Good for naturalizing or the middle of a big border. Said to have an unpleasant fragrance but will not drive you out of the garden. Easy to grow in well-drained soil in full to partial sun. 4-6' tall. 1 1/4" bulbs.
6841*: 1/$6.00;*
6842*: 2/$11.00;*
6843*: 3/$15.50*



***Monarda didyma* Bee Balm** or **Oswego Tea** is loved by bees, butterflies and hummingbirds. Attractive showy flower heads with tubular petals on pincushion heads borne above colorful bracts in July and August. Coarse aromatic foliage. Good for borders, naturalized in wet areas, and for cutting. A vigorous member of the mint family—some might say invasive. Plant crowns 16-20" apart in light shade in moist soil. Thrives in full sun if given adequate moisture or mulched with leaf mold; tolerates most conditions. Z3.



***M.* 'Blue Stocking'** Violet-purple with purple bracts. *Blaustrumpf* in German. 34-38" tall.

***6851**: 1/$3.50;*
***6852**: 3/$9.50;*
***6853**: 6/$17.25*

***M.* 'Jacob Cline'** Recent variety selected for its very large 5" red flowers, vigor and mildew resistance. Now embraced in the nursery trade as "the best red." 4-5' tall.

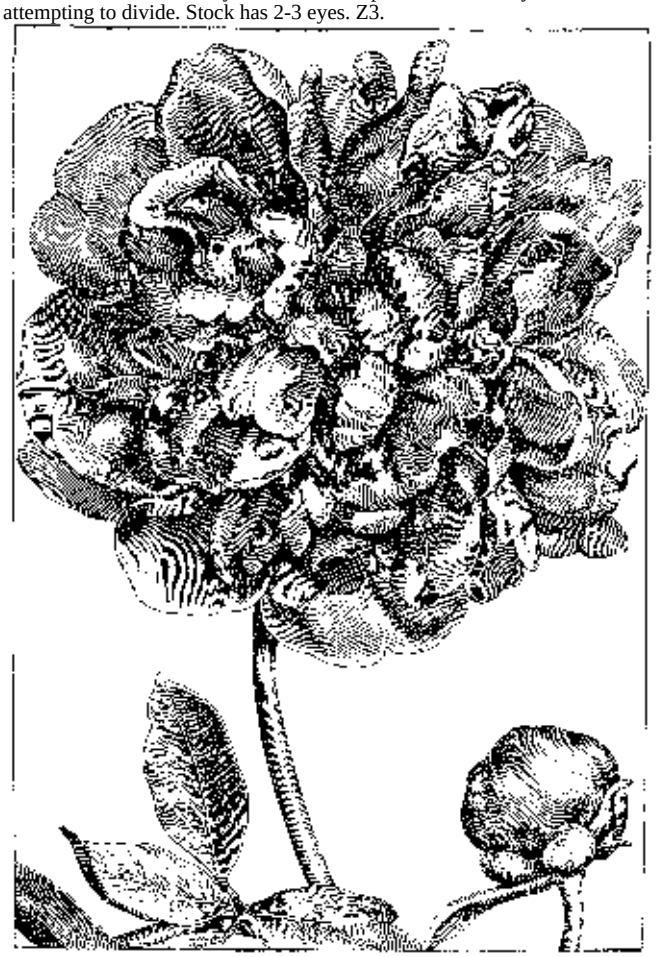
***6861**: 1/$3.50;*
***6862**: 3/$9.50;*
***6863**: 6/$17.25*

***M.* 'Marshall's Delight'** Soft pink with light green leaves. The Chicago Botanical Garden Monarda trials rated it very highly for flower production, overall vigor and resistance to mildew. 36" tall.

***6871**: 1/$3.50;* ***6872**: 3/$9.50;* ***6873**: 6/$17.50*

***Pæonia lactiflora* Garden Peony** or **Chinese Peony** Red shoots appear in spring and form a bushy clump, about 3x3', of lustrous dark green deeply lobed foliage. Fat spherical buds on sturdy stems above the foliage gradually open into large beautiful double flowers in late spring to early summer. (Ants help the buds to open so don't discourage their presence.) Huge flowers are stunning on the bush and wonderful when cut. If you catch the buds when they are just marshmallow soft, they can be stored for weeks in the fridge for flowers later.

May take up to 3 to 5 years to establish before blooming and resent being disturbed. Wait several years, until the plants have many stems, before attempting to divide. Stock has 2-3 eyes. Z3.



***P. l.* 'Bowl of Beauty'** Striking two-tone effect of this Japanese flower-type makes me think of a bright pink bowl holding one big scoop of French vanilla ice cream. A partially double row of carmine-pink petals opens to display a creamy-yellow carnation-like center made up of a profusion of narrow petaloids. Scented. Midseason. 38" tall.

***6881**: 1/$8.75;* ***6882**: 2/$16.00;* ***6883**: 3/$21.75*

***P. l.* 'Festiva Maxima'** Introduced in 1851 and possibly my favorite peony, though it would be hard to decide between Festiva and Sarah Bernhardt. Large fragrant double white flowers have tiny crimson lines traced randomly through some of the inner petals. Early season. 36-39" tall.

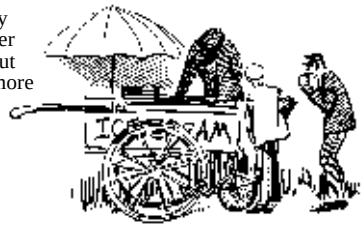
***6891**: 1/$5.75;* ***6892**: 2/$9.75;* ***6893**: 3/$14.00*

***P. l.* 'Sarah Bernhardt'** Fragrant flowers open with narrow red lines shot onto light rose-pink. Matures to delicate pink with a slight creamy-silvery edge. Can a pink be both warm and silvery? This one is. One of my favorites with exactly the right amount of doubling—appears richly full but not crammed. Late season. 36".

***6901**: 1/$5.75;* ***6902**: 2/$9.75;* ***6903**: 3/$14.00*

***P. l.* 'Sorbet'** "Bomb-type" variety begins with light magenta-pink outer petals which enclose white finely cut inner petals out of which explode more pink petals. The effect is triple-decker and completely over-the-top. Midseason. 28-30" tall.

***6911**: 1/$8.75;*
***6912**: 2/$16.00;*
***6913**: 3/$21.75*



***P. officinalis* 'Rubra Plena'** Double Red **Common Peony** Vivid crimson red, fully double with satiny ruffled petals, flowers about 5" wide. Very similar to the Garden Peony in appearance and culture. The only differences that I can determine are that flowers are not fragrant, the undersides of the leaves are slightly hairy and the bush is slightly shorter. *P. lactiflora* is native to northern China and Siberia and *P. officinalis* to southern Europe. *Officinalis* indicates that a species was once part of the official pharmacopoeia. We're still wondering whether Europeans used peony roots medicinally before they learned to do so from the Chinese. Apparently both species have similar medicinal properties. Early season. Z3.

***6921**: 1/$5.50;* ***6922**: 2/$9.50;* ***6923**: 3/$13.60*

Garden Peonies Plant 2-3' apart with the eyes (where the growth shoots meet the root) no more than 1-1½" below the surface in well-drained soil, full sun to partial shade. Peonies are extremely long-lived so amend the soil richly when you plant. Compost, very well-rotted manure, bone meal and azomite are all recommended. After that they needing only a bit of weeding to flourish.

Mature plants often need staking or tying because flowers and buds can be quite heavy. This year I began experimenting with a promising method that Mary Fowler recommended. She cuts a flat circle of chicken wire 2 or 3' in diameter and places it on the shoots when they are 8-10" tall. The shoots lift the wire, grow through it and use it for an invisible support.

Cut dead foliage to near ground level in fall. Plant along the driveway; a heavy snowbank doesn't bother them.

Tree Peonies Tolerate moist soils but require good drainage. Plants thrive in full sun but it may fade flower color. Plant graft union 2-3" below soil level, in rich well-drained soil. Don't prune except for removing dead wood in spring after plants have leafed out.

Pæonia suffruticosa **Japanese Tree Peony** or **Moutan** is expensive, but as garden writer Peter Coats says, "It is worthwhile to sell everything one possesses to buy pæonies, and to dig up everything else in the garden to make room for them." A fashion craze in China by the 7th century, tree peonies appear in poets' songs and as decorative motifs in architecture and fabric. 19th century botanical explorer Robert Fortune reported a specimen outside Shanghai that produced 300-400 flowers a year.

Deciduous shrub with deeply cut narrow-lobed medium green foliage forms many (though probably fewer than 300 in its first century) large stunning flowers in early June, before Garden Peony. Semi-double extravagantly big flowers with loose satiny petals. Full sun promotes fastest growth but fades flowers which do best in dappled shade; fanatics shade plants with umbrellas while they are flowering. 48-60" tall. 1-yr. plants imported from Japan may need 2-3 years to mature before blooming begins. Z4.

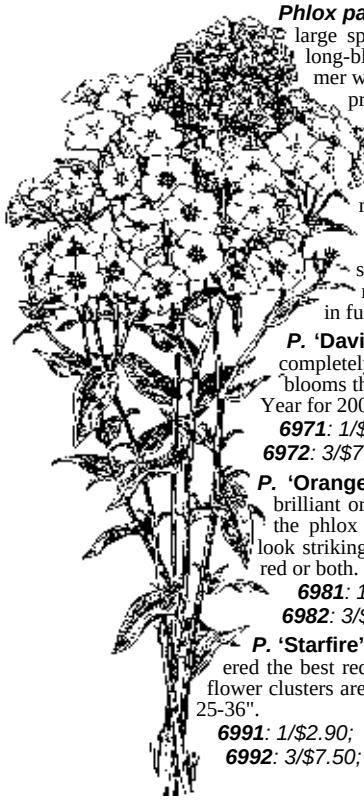
P. s. **'Kamatanishiki' Tree Peony** wisteria blue with lighter edges, semi-double.
6931*: 1/$19.50;*
6932*: 2/$35.00;*
6933*: 3/$48.00*

P. s. **Pink Tree Peony**
6941*: 1/$14.75;*
6942*: 2/$24.00;*
6943*: 3/$34.00*

P. s. **Red Tree Peony**
6951*: 1/$14.75;*
6952*: 2/$24.00;*
6953*: 3/$34.00*

Perovskia atriplicifolia **Russian Sage** blossoms in midsummer with slender airy spires of lavender-blue tubular flowers. Finely divided grey leaves are aromatic when crushed. 1995 PPA Plant of the Year. Low-maintenance background or filler beautiful with roses or whites and blues. Perovskia has one of the longest bloom times of any blue-flowered plant. Upright habit, semi-woody shrub, emerges slowly in spring; cut back after frost. Tolerates drought, loves heat and full sun, can't bear standing water. 3-4' tall. Likes to spread out once it gets established; plant 24-36" apart. I suspect that Zone 4 reports of winterkill are from poor drainage rather than cold, so a cautious Z4.

6961*: 1/$3.50;* ***6962****: 3/$9.00;* ***6963****: 6/$17.00*



Phlox paniculata **Garden Phlox** produces large spreading clusters of fragrant showy long-blooming flowers in mid to late summer when so many blooms are fading, and produces delicate satiny panicles when so many blooms are coarse. Wonderful color and fragrance for accents, border or naturalized area. Attracts butterflies and hummingbirds. Extend flowering season by watering and prompt deadheading. Prefers humus-rich soil that stays cool and moist in summer and regular sidedressing. Plant 2' apart in full sun to partial shade. Z3.

P. **'David'** White flowers cover the plant so completely with enormous (6x7") and fragrant blooms that it was voted the PPA Plant of the Year for 2002. 30-42" tall.
6971*: 1/$2.90;*
6972*: 3/$7.50;* ***6973****: 6/$17.00*

P. **'Orange Perfection'** Vigorous grower is brilliant orange with slightly darker eye. Give the phlox bed a new twist; I think it would look striking with combined with the white, the red or both. 36".
6981*: 1/$2.90;*
6982*: 3/$7.50;* ***6983****: 6/$16.75*

P. **'Starfire'** Reliable old favorite often considered the best red. Large (6x6") abundant cherry-red flower clusters are fragrant from midsummer into fall. 25-36".
6991*: 1/$2.90;*
6992*: 3/$7.50;* ***6993****: 6/$16.75*

Polygonatum biflorum **Solomon's Seal** forms clumps of graceful arching stems about 3' long with long narrow alternate leaves. Greenish-white bell-shaped tubular flowers dangle from the stems in a row in late spring, and become small round blue-black fruits in early fall. Shade- and moisture-loving, with a serene habit, Solomon's Seal is ideal for the shade or woodland garden and makes a good foil for ferns. Don't confuse it with False Solomon's Seal which has a plume-like flower at the *end* of its stem. Native Americans used the root tea for ailments of stomach and lung and for general debility, and used washes from the root for all kinds of external injuries. I am not aware of local herbalists using this native plant nowadays. Sends up a few more stems every year; sturdy and long-lived. Native eastern wild plant, rescued from wild sites about to be developed, and nursery propagated. Z3.

7001*: 1/$2.90;*
7002*: 3/$7.50;*
7003*: 6/$14.00*

Pulsatilla vulgaris **'Rubra' Pasque Flower** (formerly *Anenome pulsatilla*) bears bell-shaped starry burgundy flowers 2-3" wide in early spring. Wooly buds turn to silver-fuzzed flowers, followed by highly ornamental deeply cut fernlike foliage, then seeds form in masses of silvery down. 8-10" tall. Good for the rockery or border. Plant 6-8" apart in full sun, fertile soil. Unharmed by late frost or snow but demands good drainage and prefers not to be disturbed. Z4.

7011*: 1/$3.00;* ***7012****: 3/$7.75;* ***7013****: 6/$14.50*

Stachys byzantina **'Helene von Stein' Lambs' Ears** or **Woolly Betony** (Also known as 'Big Ears') I've always bent to touch and enjoy the Lambs' Ears, but I've never liked their ungainly fuzzy-stalked flowers. Helene von Stein is selected to have almost no flower stalks and her ears are a bit bigger and more pointed than the ordinary variety. White-felted medium-green leaves form a thick clump and make good edging or a low accent in the moon garden. Grow in full sun, well-drained soil. 8-10" tall. Z4. **ME Grown.**

7021*: 1/$3.50;* ***7022****: 3/$9.00;* ***7023****: 6/$16.25*

Tiarella cordifolia **Foam Flower** or **False Mitrewort** Native wildflower nicknamed for its foamy profusion of blossoms. Dense upright finger-shaped racemes 12" tall are covered with countless teensy creamy-white blossoms in spring. Foliage, heart-shaped, lobed and toothed, resembles maple leaves and becomes bronze red in autumn. Likes cool shaded spots, spreads by stolons. Easy to grow. Plant 6-12" apart in a woodland garden. Nursery-propagated stock salvaged from wild plant sites that were about to be destroyed. Z3.

7031*: 1/$2.90;*
7032*: 3/$7.50;*
7033*: 6/$14.25*

***Trillium erectum* Red Trillium** or **Wakerobin** or **Stinking Benjamin** Last spring our local wildflower preserve featured huge patches of red trillium blooming in late April, a spectacular and pleasing sight. All the descriptions mention a bad smell, but we didn't get the "stinking" part, detecting only a faint oceany hint of tidal flats. Maroon blossom with three petals and three sepals sits erect on a short stem above the three oval leaves in a single whorl. Grows in moist rich woods, full or part shade, from Nova Scotia to the mountains of Georgia, west into Michigan. Nursery-propagated stock. Z4.

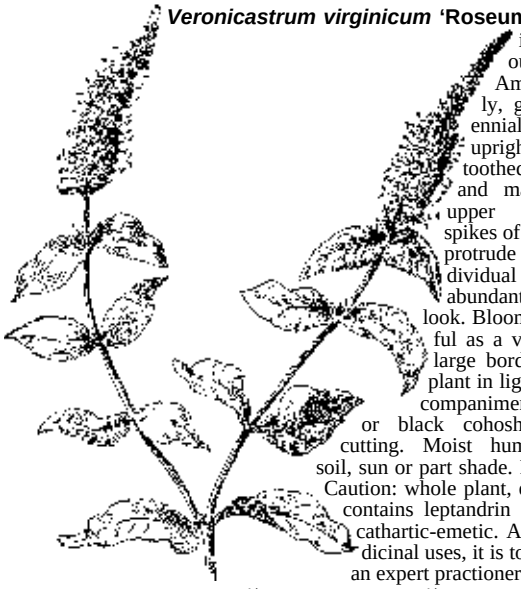
***7041**: 1/$3.00;*
***7042**: 3/$7.75;*
***7043**: 6/$14.50*

***Trollius* x *cultorum* 'Orange Princess' Globeflower** One could call them big overgrown hyper-selected buttercups and I do, but I am crazy about Trollius. Palmately lobed, then further divided and toothed (buttercup-like) leaves form a mound. Spherical to bowl-shaped orangy-yellow double flowers bloom in late spring, around the time of late tulips, on stems above the foliage. That time of year the fancy petal-filled flowers seem miraculous. Excellent for cutting. Ideal for a moist border, streamside, or naturalizing in a damp meadow. Like moist to wet settings, heavy soil, full sun to part shade. Cut back after blooming. Plant 8-12" apart. 12-24" tall. Z3.

***7051**: 1/$3.75;* ***7052**: 3/$9.50;* ***7053**: 6/$17.50*

***Veronica austriaca* 'Crater Lake Blue' Speedwell** forms a bushy clump 12-18" tall with narrow deep green toothed leaves. Each stalk has a terminal flower spike thickly covered with tiny tubular blossoms. Blooms when the shrub roses do in an intensely rich gentian blue, a blue to die for. When the plants get big, they will probably fall down after blooming; I have always found the blossoms worth it. Give them support if you wish them to remain upright. A favorite cultivar of mine since the early '80s. Easy to grow in ordinary well-drained soil, sun or partial shade. Plant 10-15" apart. Z3.

***7061**: 1/$3.75;* ***7062**: 3/$9.50;* ***7063**: 6/$17.50*



***Veronicastrum virginicum* 'Roseum' Culver's Root** is native throughout eastern North America but a "stately, garden-worthy perennial" as well. Tall 3-6' upright stalks have toothed leaves in whorls and many terminal and upper axillary flower spikes of soft pink. Stamens protrude from each tiny individual flower giving the abundant spikes a fuzzy look. Blooms in summer, useful as a vertical accent in a large border or a woodland plant in light shade. Good accompaniment to monkshood or black cohosh, and good for cutting. Moist humusy well-drained soil, sun or part shade. Plant 18-24" apart. Caution: whole plant, especially the root, contains leptandrin and is a powerful cathartic-emetic. Although it has medicinal uses, it is too toxic for any but an expert practioner to use. Z3.

***7071**: 1/$4.00;* ***7072**: 3/$10.00;* ***7073**: 6/$19.00*

Perennial Medicinal Plants

Growing medicinal plants in your own garden gives you the opportunity to come to know their personalities, forms, uses and spirits. It also helps to prevent wild plants from being overharvested. Medicine you make from your plants returns you to your garden, regardless of the time or the place that you use it.

Many of the other plants we list have a tradition of medicinal use as well. These include Lavender, Bee Balm, Peony, Rose, Elder, Hops, Ginkgo, Linden, Hawthorne, Witch Hazel, Blueberry, Cranberry and Highbush Cranberry. (Index on pp. 58-59.)

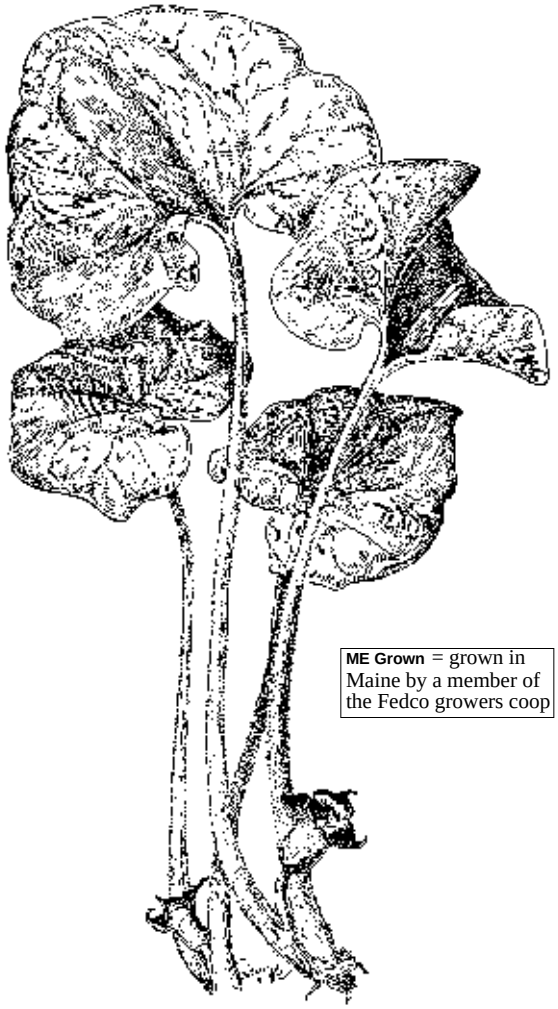
Like most perennials, these appreciate a fall mulch and a sidedressing of compost or leaf mold in the spring. Some may take a year or more to establish before they flower; roots often take several years to reach harvestable maturity. The organic listings are MOFGA-certified, grown by Gail Edwards of the Blessed Maine Herb Company in Athens or by Paula and Mark Fulford in Monroe. Supplies may be limited, so order early.

***Alchemilla mollis* Lady's Mantle** Enchanting tiny fans of leaves emerge in early spring and unfold into a mound of rounded fan-creased silvery, grey-green foliage. Sprays of minute yellow-green stars bloom on 15" tall stalks above the foliage. Most herbals list the medicinal variety as *A. vulgaris*; perennial growers list a very similar species as *A. mollis* in this botanically bewildering genus. Herbalists agree that species similar to *vulgaris* have similar medicinal properties. Astringent herb with an affinity for women, Lady's Mantle is a uterine tonic said to promote fertility, also helpful during any hormonal changes. Used as a poultice to tone and firm breast tissue. Easy to grow in most soils, likes moisture, sun or part shade. **ME Grown.**

***7081**: 1/$4.00;* ***7082**: 3/$10.00;* ***7083**: 6/$19.00*

***Asarum canadense* Canadian Wild Ginger** Heart-shaped leaves up to 7" wide will spread into a beautiful groundcover 6-12" tall if given humus, shade and plenty of moisture. Leaves are large and slightly fuzzy, not small and glossy like the European species. Aromatic roots used like other gingers for their warming qualities and for soothing indigestion, coughs, colds, motion sickness. Grown for roots and foliage. The small reddish-brown urn-shaped flowers grow near the soil surface or in the leaf mold so crawling insects will pollinate them. They're fun to search for but won't decorate your landscape. Plants rescued from wild sites before development and nursery propagated. Z3.

***7091**: 1/$2.90;* ***7092**: 3/$7.50;* ***7093**: 6/$14.25*



ME Grown = grown in Maine by a member of the Fedco growers coop

***Cimicifuga racemosa* Black Cohosh** or **Black Snakeroot** flourishes in the wilder part of the garden or shady border. In late July and August, long arching racemes of creamy flowers rise above the mound of compound foliage, hence another common name: **Fairy Candles**. Anti-spasmodic for cramps, pains, cramped nerves and emotions, included in many peri-menopausal formulas. I've heard quite a few women my age say rather passionately, "I *love* this plant!" Diuretic and anti-inflammatory. Easy to grow, long-lived, needs division or harvest every 4-5 years. Good in boggy spots. 36-72" tall. Plant 30-36" apart in rich moist soil high in humus. Prefers part shade, but tolerates full sun in deep moist soil. Z3.

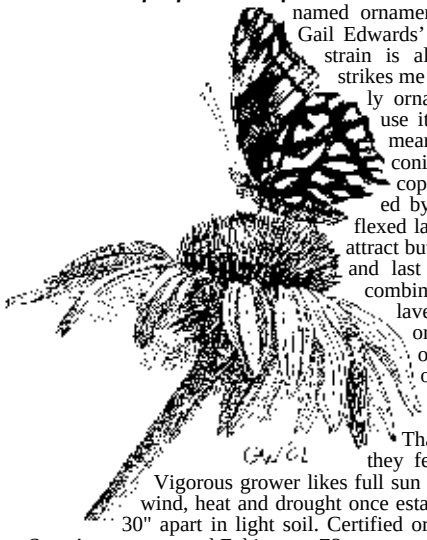
***7101**: 1/$4.50;* ***7102**: 2/$7.75;* ***7103**: 3/$10.50*

***Codonopsis pilosula* Poor Man's Ginseng** would be fun to grow as a novel ornamental even apart from its medicinal properties. Tendrilly twining vines are about 4' long in their second year and have small ovate leaves. Mature vine about 6' long. Buds look like green peas, swell to little green balloons and flower as green bells with purple veining, then mature to five-sided-balloon seed pods.

Considerably easier to grow than true ginseng. Energizing, adaptogenic, supports the deep immune system. Called *dang shen* in China. Harvest 4- to 6-year-old roots. Sun to part shade, good drainage. Year-old plants are certified organic. Z4. **ME Grown.**

***7111**: 1/$5.25;* ***7112**: 2/$9.00;* ***7113**: 3/$13.00*

***Echinacea purpurea* Purple Coneflower** Some year we may offer a named ornamental strain of Echinacea, but Gail Edwards' organically grown medicinal strain is also stunningly beautiful and strikes me as more valuable than a merely ornamental cultivar, even if you use it only for ornament. *Echinos* means spiny and the flower's big conical centers are very spiny and coppery yellow-brown, surrounded by a single row of slightly reflexed lavender-purple petals. Flowers attract butterflies and beneficial insects, and last well when cut. Their color combination marries pinks, oranges, lavenders and golds that wouldn't ordinarily go together in beds or bouquets. Tincture the roots of 3-year-old plants for a remedy that gives an immediate boost to the immune system. That's why people use it when they feel a cold or flu coming on. Vigorous grower likes full sun and sandy loam, and tolerates wind, heat and drought once established. 30-48" tall. Plant 20-30" apart in light soil. Certified organic. See **#6451**, for 'White Swan', an ornamental Echinacea. Z3. **ME Grown.**



***7121**: 1/$5.25;* ***7122**: 2/$9.00;* ***7123**: 3/$13.00*

***Glycyrrhiza uralensis* Chinese Licorice** is valued as a medicine, a sweetener and a flavor. Soothes stomaches, sore throats, mucous membranes; balances energy and hormones. Good for menopausal women, but people with hypertension and diabetes should avoid. *Gan cao* in China. Gail Edwards recommends sucking on slices of fresh or dried roots, which can be harvested from the second year onward and are astoundingly sweet. Good for making herbal concoctions palatable. Leguminous plant has compound oval leaves. Grows to 1-5' tall. Prefers part shade and moisture. Plant 8-12" apart. Once established, roots spread out vigorously. One-year-old organic plants. Z5. **ME Grown.**

***7131**: 1/$5.25;* ***7132**: 2/$9.00;* ***7133**: 3/$13.00*

***Hydrastis canadensis* Goldenseal** Native Americans taught Europeans how to use this healing plant which has astringent and powerfully tonic qualities for all mucous membranes. Used in cold formulas and for other respiratory complaints, as well as for inflammations of the digestive tract. Paula Fulford, our grower, tinctures the yellow root or uses it dried and powdered, and says the leaves have weak medicinal properties as well. Plants have upright stalks, typically forked into two stems, each with a deeply incised dark green leaf with 5-9 lobes and toothed edges. A white flower appears above the foliage in spring and matures to a red berry. 6-12" tall. Likes rich woodland soil; culture is similar to ginseng's but goldenseal is easier to grow. Use plenty of compost and leaf mold for very humus-rich well-drained soil. Grow in almost total shade and prevent any competition. Harvest root after the seeds ripen in fall. Organically grown stock. Z3. **ME Grown.**

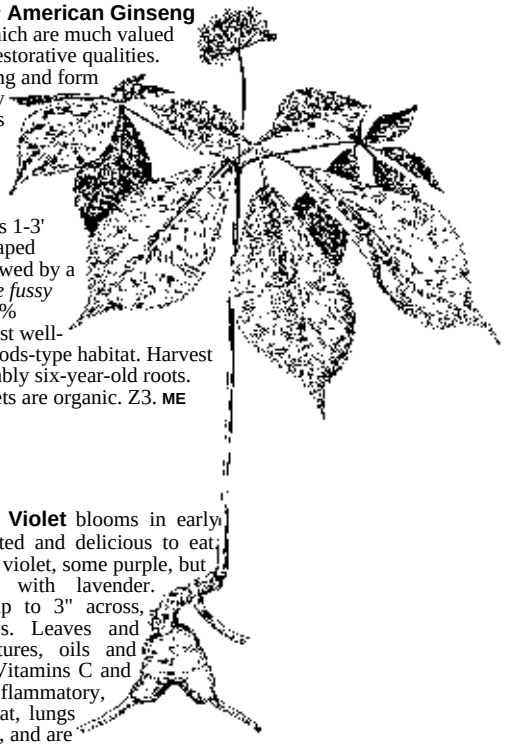
***7141**: 1/$7.50;* ***7142**: 2/$12.75;* ***7143**: 3/$18.50*

***Hyssopus officinalis* Hyssop** Seeing Gail's big bed of hyssop in bloom last August reminded me what an ornamental plant it is. Wonderful and aromatic for low hedge, herb garden or border. Bees love its blue-violet flowers on erect stalks which blossom June to September. Infusions long used for sore throats and stomach troubles, flower spikes in cough syrups. Thrives in dry soil, useful on slopes and any sunny difficult place. 12-16" tall. Plant 12-24" apart in poor soil, full sun to light shade. Certified organic. Z3. **ME Grown.**

***7151**: 1/$4.50;* ***7152**: 2/$8.40;* ***7153**: 3/$11.50*

***Lavandula* Lavender** See #**6711**.

***Panax quinquefolius* American Ginseng** is grown for its roots which are much valued for their tonifying and restorative qualities. Stems emerge each spring and form a whorl of three coarsely toothed leaves. Gail says when you see how it emerges from the soil, like a curled-up claw, you know right away that it's powerful. Grows 1-3' tall. Small white star-shaped flowers in summer followed by a bright red fruit. *They are fussy about location*. Need 90% shade and deep rich moist well-drained soil in a hardwoods-type habitat. Harvest at least four- and preferably six-year-old roots. Tiny one-year-old rootlets are organic. Z3. **ME Grown.**



***7161**: 1/$7.50;*
***7162**: 2/$12.75;*
***7163**: 3/$18.50*

***Viola* spp. Common Violet** blooms in early spring, is sweetly scented and delicious to eat. Colors are mixed: some violet, some purple, but mostly white etched with lavender. Heart-shaped leaves, up to 3" across, grow in basal clumps. Leaves and flowers, used in tinctures, oils and syrups, are sources of Vitamins C and A, antioxidant, anti-inflammatory, and nourishing for throat, lungs and reproductive organs, and are important ingredients in my spring wild salads. Gail calls violets "powerful magical healing herbs."

Wild species abound and we aren't positive which these are, probably *V. papilionacea* which botanists classify under *V. sororia*. Fortunately, the *Viola* species are interchangeable in their medicinal use. I was interested to learn that you can pick every flower and still have seeds. *Violas* have showy but seedless (chasmogamous) flowers in spring, later forming (cleistogamous) self-pollinating petal-less flowers that mature into a seed capsule very close to the ground. Vigorous self-sowing can be a nuisance or a good ground cover for shade. Likes rich moist well-drained soil and part shade. 4-8" tall. Grown without chemical fertilizers, pesticides or herbicides. Z4. **ME Grown.**

***7171**: 1/$4.50;* ***7172**: 2/$8.40;* ***7173**: 3/$11.50*

Plants for wet spots

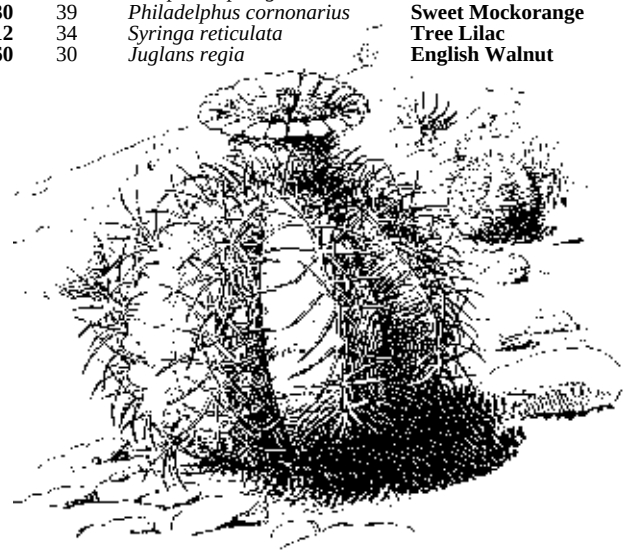
#	page	Name	Common Name
3230	29	*Thuja occidentalis*	**Arborvitae**
1920ff	20	*Vaccinium sp*	**Blueberry**
6851	52	*Monarda didyama*	**Bee Balm**
3648	31	*Betula alleghaniensis*	**Yellow Birch**
4270	37	*Cephalanthus occidentalis*	**Buttonbush**
4240ff	36	*Aronia sp*	**Chokeberry**
7101	55	*Cimicifuga racemosa*	**Black Cohosh**
2496	26	*Vaccinium macrocarpon*	**American Cranberry**
2885	28	*Viburnum trilobum*	**Highbush Cranberry**
4277	38	*Cornus amomum*	**Silky Dogwood**
2760ff	28	*Sambucus canadensis*	**Elderberry**
6471ff	48	*Athyrium, Adiantum, Matteucia...*	**Ferns**
4358	38	*Fothergilla major*	**Large Fothergilla**
3910	32	*Chionanthus virginicus*	**Fringetree**
7051	54	*Trollius*	**Globeflower**
6671	50	*Iris ensata*	**Japanese Iris**
6701	50	*Iris siberica*	**Siberian Iris**
2570	27	*Amelanchier alnifolia*	**Juneberry**
3625	30	*Acer rubrum*	**Red Maple**
4576ff	40	*Potentilla fruticosa*	**Potentilla**
3000	29	*Metasequoia glyptostroboides*	**Dawn Redwood**
4274	38	*Comptonia peregrina*	**Sweetfern**
3832ff	32	*Salix sp*	**Willows**
4738	40	*Salix gracilistyla*	**Black Pussy Willow**
4398ff	39	*Ilex verticillata*	**Winterberry**
3970	33	*Hamamelis viginiana*	**Witch Hazel**

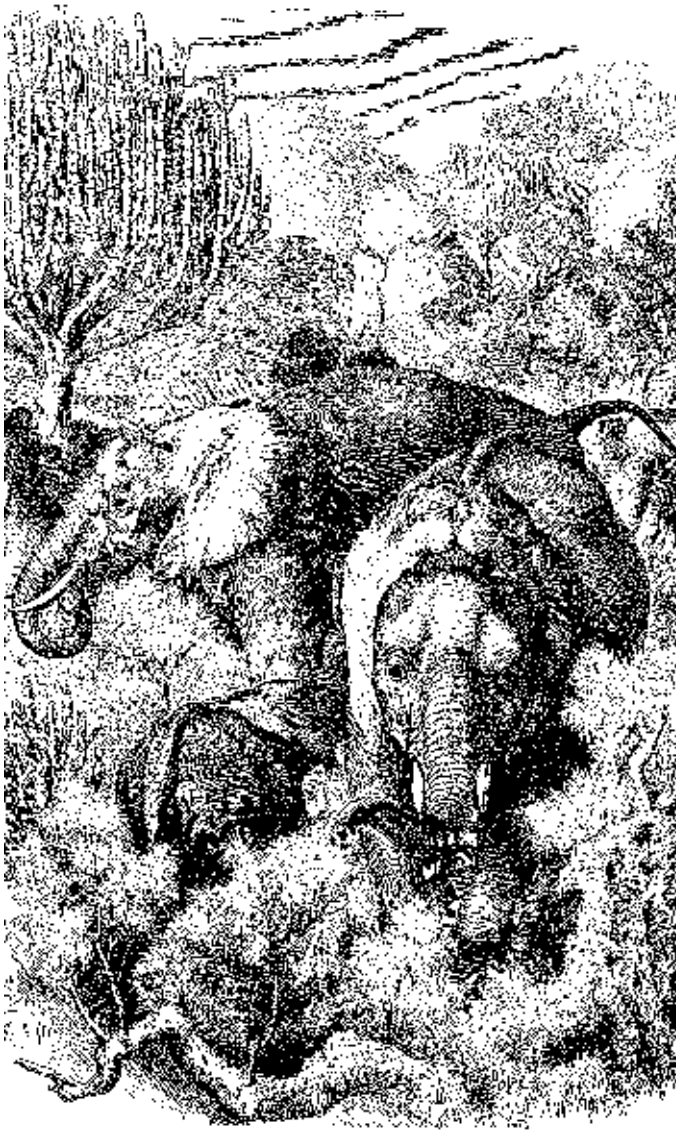
Plants that like shade

#	page	Name	Common Name
3230	29	*Thuja occidentalis*	**Arborvitae**
2910	28	*Abies balsamea*	**Balsam Fir**
3648	31	*Betula alleghaniensis*	**Yellow Birch**
4227	36	*Aesculus parviflora*	**Bottlebrush Buckeye**
4270	37	*Cephalanthus occidentalis*	**Buttonbush**
4240ff	36	*Aronia sp*	**Chokeberry**
2640	27	*Cornus mas*	**Cornelian Cherry**
4235	36	*Aristolochia durior*	**Dutchman's Pipe Vine**
2885	28	*Viburnum trilobum*	**Highbush Cranberry**
6471ff	48	*Athyrium, Adiantum, Matteucia...*	**Ferns**
7031	53	*Tiarella cordifolia*	**Foamflower**
4358	38	*Fothergilla major*	**Large Fothergilla**
6541	49	*Helleborus orientalis*	**Hellebore**
6551ff	50	*Hosta*	**Hosta**
4375	39	*Hydrangea sp*	**Hydrangea**
2555ff	27	*Amelanchier alnifolia*	**Juneberry**
6371	47	*Convallaria majalis*	**Lily of the Valley**
3907	33	*Cercis canadensis*	**Redbud**
7001	53	*Polygonatum biflorum*	**Solomon's Seal**
7171	55	*Viola*	**Violet**
3970	35	*Hamamelis viginiana*	**Witch Hazel**

Plants for dry spots

#	page	Name	Common Name
1900	20	*Vaccinium angustifolium*	**Lowbush Blueberry**
4240ff	36	*Aronia sp*	**Chokeberry**
2910	28	*Abies balsamea*	**Balsam Fir**
3949	31	*Koelreuteria paniculata*	**Goldenrain Tree**
2555	27	*Amelanchier alnifolia*	**Juneberry**
6711	51	*Lavendula angustifolia*	**Lavender**
4790ff	42	*Syringa vulgaris*	**Lilac**
3791	32	*Quercus melanocarpa*	**Bur Oak**
3797	32	*Quercus rubra*	**Red Oak**
3170	29	*Pinus resinosa*	**Red Pine**
2722	28	*Prunus maritima*	**Beach Plum**
2707	27	*Prunus sp*	**Wild Plum**
4576ff	40	*Potentilla fruticosa*	**Potentilla**
4627ff	40	*Rosa rugosa*	**Rosa rugosa**
6961	53	*Perovskia atriplicifolia*	**Russian Sage**
4285	38	*Cotinus coggygria*	**'Royal Purple' Smokebush**
4274	38	*Comptonia peregrina*	**Sweetfern**
4530	39	*Philadelphus cornonarius*	**Sweet Mockorange**
4212	34	*Syringa reticulata*	**Tree Lilac**
3460	30	*Juglans regia*	**English Walnut**



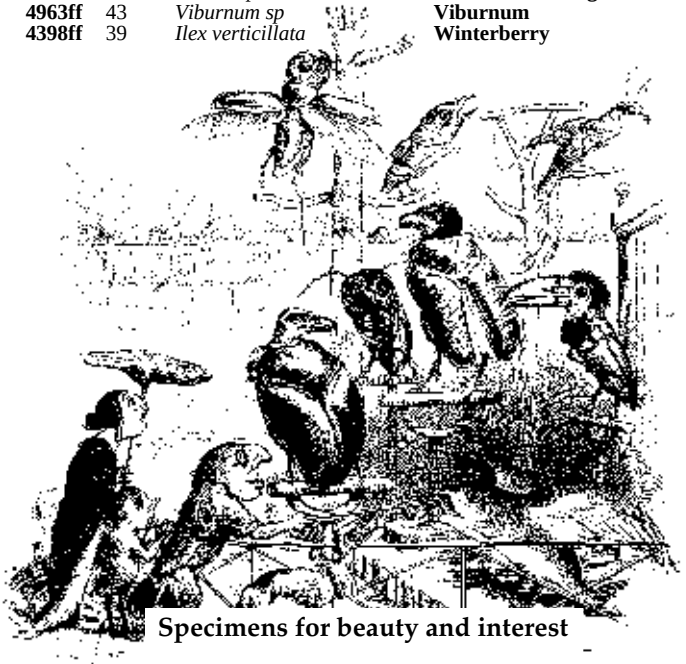


Plants to attract wildlife

#	page	Name	Common Name
3230	29	*Thuja occidentalis*	**Arborvitae**
4480	39	*Myrica pensylvanica*	**Bayberry**
1900ff	20	*Vaccinium sp*	**Blueberry**
4270	37	*Cephalanthus occidentalis*	**Buttonbush**
3405	30	*Castanea mollissima*	**Chinese Chestnut**
2640	27	*Cornus mas*	**Cornelian Cherry**
2725	28	*Prunus tomentosa*	**Nanking Cherry**
4240ff	36	*Aronia sp*	**Chokeberry**
4020ff	34	*Malus sp*	**Crabapple**
2885	28	*Viburnum trilobum*	**Highbush Cranberry**
3920	33	*Cornus alternifolia*	**Pagoda Dogwood**
4277	38	*Cornus*	**Dogwood**
2760ff	28	*Sambucus canadensis*	**Elderberry**
2910	28	*Abies balsamea*	**Balsam Fir**
3910	33	*Chionanthus virginicus*	**Fringetree**
3949	34	*Crateagus phaenopyrum*	**Washington Hawthorn**
4450ff	39	*Lonicera sp*	**Honeysuckle**
2555ff	27	*Amelanchier alnifolia*	**Juneberry**
3850	32	*Tilia americana*	**Linden**
3625ff	30	*Acer sp*	**Maple**
4207	34	*Sorbus decora*	**Mountain Ash**
2688	27	*Morus alba*	**Mulberry**
3785ff	32	*Quercus sp*	**Oak**
3170ff	29	*Pinus sp*	**Pine**
2707ff	27	*Prunus sp*	**Wild Plum**
4627ff	40	*Rosa spp*	**Roses**
3040ff	29	*Picea sp*	**Spruce**
4620	40	*Rhus aromatica*	**Fragrant Sumac**
4963ff	31	*Viburnum sp*	**Viburnum**
3455ff	30	*Juglans sp*	**Walnut**
4398ff	39	*Ilex verticillata*	**Winterberry**
3970	34	*Hamamelis virginiana*	**Witch Hazel**

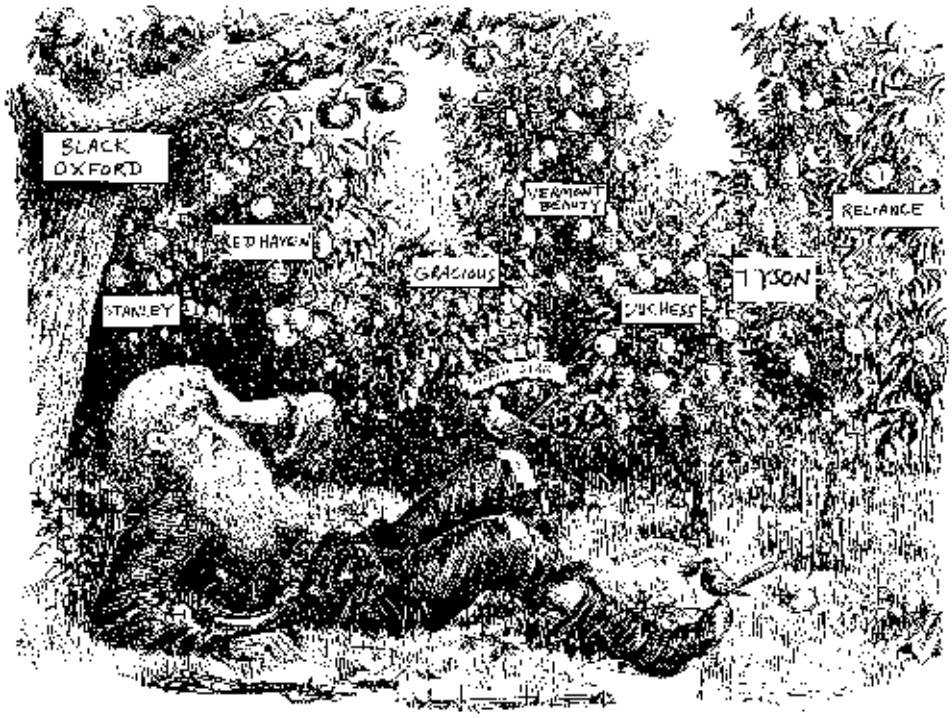
Plants that form hedges

#	page	Name	Common Name
3230	29	*Thuja occidentalis*	**Arborvitae**
2910	28	*Abies balsamea*	**Balsam Fir**
4227	36	*Aesculus parviflora*	**Bottlebrush Buckeye**
4320	38	*Euonymus alatus*	**Burning Bush**
2725	28	*Prunus tomentosa*	**Nanking Cherry**
2885	27	*Viburnum trilobum*	**Highbush Cranberry**
4240ff	36	*Aronia sp*	**Chokeberry**
4277	38	*Cornus amomum*	**Silky Dogwood**
2760ff	27	*Sambucus canadensis*	**Elderberry**
4340	38	*Forsythia*	**Forsythia**
3949	34	*Crataegus phaenopyrum*	**Hawthorn**
2555	26	*Amelanchier alnifolia*	**Juneberry**
4790ff	42	*Syringa vulgaris*	**Lilac**
3082ff	28	*Pinus sp*	**Pine**
2707ff	27	*Prunus sp*	**Wild Plum**
4576ff	40	*Potentilla fruticosa*	**Potentilla**
4627ff	40	*Rosa rugosa*	**Beach Rose**
4734	41	*Rosa woodsii*	**Mountain Rose**
4748	43	*Sorbaria sorbifolia*	**Ural False Spirea**
3040ff	29	*Picea sp*	**Spruce**
4620	40	*Rhus aromatica*	**Fragrant Sumac**
4530	39	*Philadelphus cornonarius*	**Sweet Mockorange**
4963ff	43	*Viburnum sp*	**Viburnum**
4398ff	39	*Ilex verticillata*	**Winterberry**



Specimens for beauty and interest

#	page	Name	Common Name
3705	31	*Fagus sylvatica*	**Purple Beech**
3670	31	*Catalpa speciosa*	**Catalpa**
4039ff	24	*Malus sp*	**Crabapple**
3000	29	*Metasequoia glyptostroboides*	**Dawn Redwood**
3910	23	*Chionanthus virginicus*	**Fringetree**
3730	31	*Ginkgo biloba*	**Ginkgo** or **Maidenhair Tree**
3949	31	*Koelreuteria paniculata*	**Goldenrain Tree**
4212	34	*Syringa reticulata*	**Tree Lilac**
4207	34	*Sorbus decora*	**Mountain Ash**
3907	33	*Cercis canadensis*	**Redbud**
4285	38	*Cotinus coggygria*	**Smokebush**
4283	38	*Corylus avenella*	**Harry Lauder's Walking Stick**



New for 2004:

- 'Endless Summer' Blue Hydrangea
- Cider Apples
- Purple Beech
- Superchilly Mulberry
- Bottlebrush Buckeye
- 'Lilac Sunday' Lilac
- Prelude and Fall Gold Raspberries
- White Oak
- several new apples
- many new crabapples
- Perennials Collection
- Red Trillium
- Culver's Root
- 'Orange Princess' Trollius

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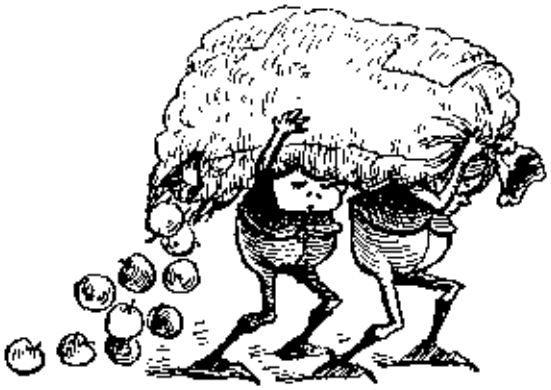

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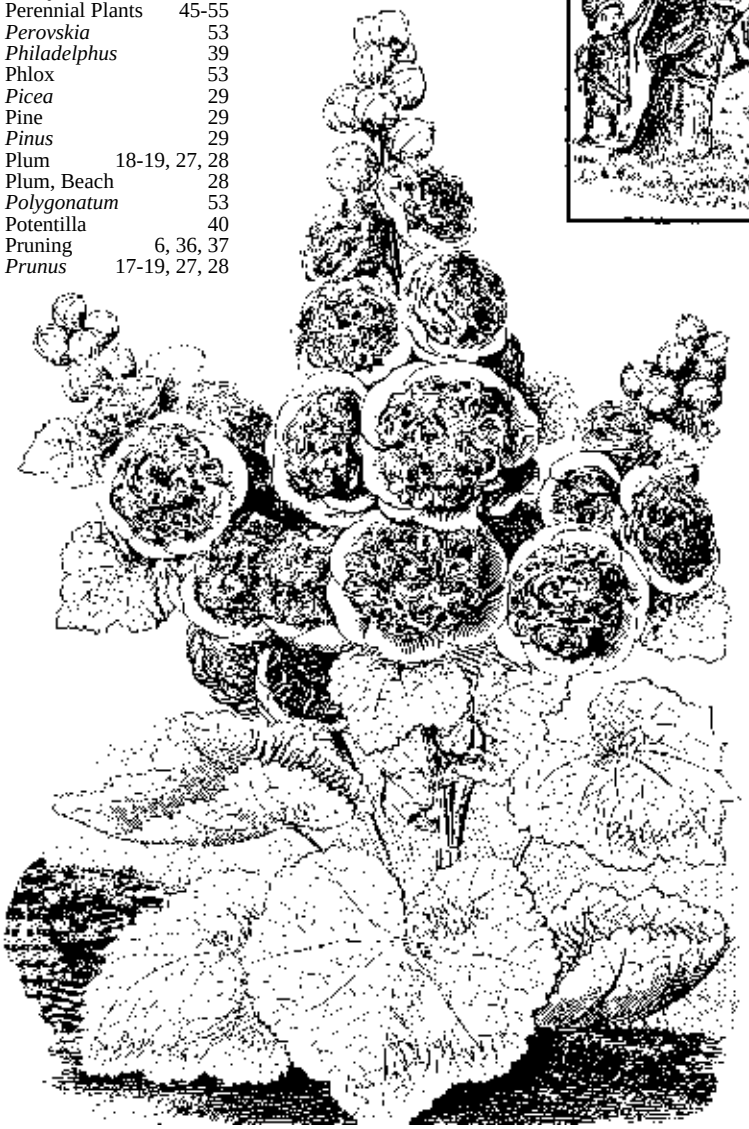

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it has planting instructions.

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